Clinical Lecture
ON
TUBERCULAR PERITONITIS IN CHILDREN.

Delivered at St. Bartholomew's Hospital, Nov. 5th, 1880,

BY SAMUEL GEE, M.D., F.R.C.P. LOND.,
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GENTLEMEN,—There are three kinds of tubercular abdominal disease occurring in children: chronic peritonitis, decay of the mesenteric glands, and ulceration of the intestines. These diseases are sometimes associated in different ways, sometimes they happen each alone by itself. They constitute a condition which the common people call "consumption of the bowels," although this term also includes the chronic enteritis which is not tubercular.

My topic to-day is tubercular peritonitis, or, what in the case of children is almost the same thing, chronic peritonitis.

I. PATHOGNOMONIC SIGNS.

They are discovered by physical examination of the abdomen, and are of two kinds: indurations and suppurations.

1. *Indurations* are detected by palpation. They have the form of bands and patches, or of lumps and knots. They certainly are present in most cases at some period or other of the disease. They begin to appear within a few weeks of the onset of the illness. They are more or less obscured by co-existing tympanites; and for this, or some other reason, they are not felt equally well at all times in the same patient. When the abdomen is very tender or resisting, I usually administer chloroform to the child before proceeding to the examination; and I strongly advise you to do the same thing in a doubtful case. The *bands* which I spoke of are commonly transverse, stretching right across the belly, or confined to one side of it. They are felt above the navel, on a level with the navel, or below it—for instance, parallel to Poupart's ligament. They are sometimes remarkably hard. They are mostly about the breadth of the finger, or rather more. The *patches* of induration, like the bands, may be met with anywhere; in a boy, now in the hospital, they are felt in the hypogastrium. The *lumps* and *knots* are sometimes very numerous, sometimes there are only one or two. Their size is very different, they often feel like nuts or pips. They differ very much in situation; there is no rule in these matters. The distinction (not always possible) between peritoneal and glandular lumps is to be found in the fact that the former are as a rule more superficial, less deeply seated than the latter.

2. *Suppuration.*—Discharge of pus from the navel, due to a local peritoneal abscess, is likewise characteristic. Sometimes there is nothing more than an appearance of pointing, which afterwards subsides, and never goes on to discharge. The navel looks red and swollen, not merely protruded, but its tissues swollen. This sign I believe to be no less characteristic. The pus is sometimes mixed with fæces. This is a condition which indicates ulceration of the intestine, and is a very much more dangerous affair than the discharge of pus alone.

Physical examination will also discover signs of either or both of two other abdominal lesions in most cases of tubercular peritonitis. *Tympanites* to a less or greater degree is a symptom almost always present at some period or other of the disease. *Ascites* is less common. In one case of this kind a diagnosis was made possible by the co-existence of phlegmonous scrofulides on the leg, otherwise there was nothing but ascites.

II. ONSET OF THE DISEASE.

Tubercular peritonitis is usually idiopathic, that is to say, it constitutes the disease in and by itself. This is the only case which I consider on the present occasion. I pass by the chronic peritonitis which is secondary to manifest tubercular disease of the lungs, intestines, or other parts.

1. The onset of protopathic tubercular peritonitis is mostly *gradual*. The belly becomes tender, painful, and large; at the same time the health of the child fails; there are emaciation, loss of appetite, and in many cases slight fever. At the beginning examination of the abdomen discovers nothing but more or less tympanites, sometimes associated with a little ascites. The tympanites usually remains moderate, but in some children it becomes excessive, so much so as to cause permanent dyspnœa. The ascites of the onset is small in quantity, and mostly goes away in a few weeks. Afterwards the indurations which I spoke of begin to appear.

2. The onset is sometimes *sudden*, and attended by very great tympanites. The tympanites is sometimes the only abdominal symptom. Sometimes it is associated with vomiting. And sometimes there are also all the signs of acute gastro-enteritis. In my lecture on tympanites last session I narrated a case of this kind—a child suddenly attacked by infantile cholera; violent vomiting and purging, with collapse, algidity, and tympanites. This was the beginning of chronic tubercular peritonitis.

III. COURSE OF THE DISEASE.

Suppose the chronic peritonitis established, you will most likely be able to detect one or other of the pathognomonic signs which I spoke of at the beginning. I will now speak of the symptoms which are attendant upon the confirmed disease. Emaciation from the first; appetite bad; vomiting now and then. Action of the bowels uncertain. Diarrhœa, occasional or even more continual, is no proof by itself of the co-existence of intestinal ulceration. Constipation is common, and it goes on in a few uncommon cases to absolute obstruction of the bowels. This obstruction is either temporary, giving way at length to the remedies employed, or it is permanent, and causes the death of the patient. The latter course is well illustrated by a case published by Dr. Wolston in the 10th vol. of the Clinical Society's Transactions. Obstruction of the bowels, although it may have been relieved, is apt to recur. Pain in the belly is sometimes severe, and is sometimes felt on heavy pressure only. The movements of the bowels are sometimes visible, whether there be much tympanites or not. Fever is present at first, but is seldom high; it often ceases altogether after a week or two; sometimes a low degree of fever is constant throughout the whole course of the disease. So that, at the time you see your patient, it may happen that there are no fever or other symptoms of disease, except the emaciation and the abdominal signs already spoken of.

IV. TERMINATION OF THE DISEASE.

1. *Recovery* from tubercular peritonitis is common. In the course of months, or a year or two, the tympanites disappears, and the indurations cease to be palpable. The patient is left pale and weak, and may continue so for the rest of life. On the other hand, he may regain his original state of health. The most positive proof of recovery from tubercular peritonitis is afforded by Mr. Spencer Wells' case,[1] in which the ascites of that disease resembled an ovarian cyst. Abdominal section was performed; the peritoneum was seen to swarm with tubercles; the intestines, for the most part, were adherent together. Acute peritonitis followed the operation, but the patient recovered, and six years afterwards she was stout, hearty, and well.

2. *Death* from tubercular peritonitis occurs in several ways. A slow exhaustion is common, especially when other forms of tubercular disease come to complicate the case. Increasing and great ascites may be the cause of death. You remember a girl who died in Mary ward after paracentesis for ascites? In her, tubercular peritonitis was associated with highly-marked cirrhosis of the liver, and this is a combination of lesions which I have seen before. Obstruction of the bowels is an uncommon cause of death.

When suppuration has occurred there is an additional danger. Mere pointing sometimes goes away without any manifest discharge of pus from the navel or any other part. When actual discharge of pus from the navel has occurred recovery is still possible. But when there are signs of a fistulous opening into the bowel the case is hopeless, as I said before.

V. THERAPEUTICS.

The first thing to mind, in the treatment of tubercular peritonitis, is to keep the abdomen at rest. This can be done only by keeping the patient in bed. I have known a boy, who was slowly recovering whilst he was in bed, undergo a fatal relapse of his disease by being taken up and dressed against orders.

Another part of the treatment consists in putting a flannel

[1] Quoted by Dr. Fagge, Guy's Hospital Reports, third series, vol. xx., p. 203.

bandage round the belly, so as to reach from the hips to the ribs. Much pain in the abdomen is alleviated by hot and moist fomentations, as hot as the patient can bear; linseed meal poultices, flannel fomentations, or, what is usually best, a flannel bag full of bran or camomile flowers, which can be heated in hot water or an oven as often as needful. You may sprinkle the fomentation with laudanum; or you may smear the abdomen with a liniment composed of equal parts of extract of belladonna and glycerine.

I need not say much about the necessity of allowing none but the most easily-digestible kinds of food; in short, to feed the patient very much as you would feed a baby. Cod-liver oil, if it can be taken, is sure to do good.

For the ascites you may try copaiba resin cautiously, beginning with three or four grains, made into an emulsion, with an equal quantity of compound tragacanth or almond powder, and some water. If this mixture disagree with the stomach you must discontinue it.

When suppuration has set in the proper treatment is assiduous poulticing.

Introductory Lecture
ON THE
CLINICAL STUDY OF THE DISEASES OF THE EYE.

Delivered at University College Hospital on Thursday, October 7th, 1880,

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GENTLEMEN,—If you take the pains to examine for yourselves the cases which come under treatment in the Ophthalmic Department of the hospital, and watch their progress, you will soon learn to recognise the principal forms of eye disease and the remedies employed for them. The study of the diseases of the eye by the practical observation of cases is comparatively an easy task, soon comes to be interesting, and is sure to prove successful. But without the aid of such means of study, the attempt to become acquainted with the nature and treatment of eye diseases is painful and laborious, and in the end unsuccessful. May what I now say be an encouragement and inducement to you to bestow some attention to the clinical study of the diseases of the eye, while you have the opportunity of frequenting the ophthalmic department of the hospital. If, however, you do not accept it as hint sufficient to incline you to do so, let what I am going to say be taken as a warning against the neglect of it.

You are not likely to be long engaged in practice before meeting with a case of the purulent ophthalmia of new-born infants. Now, this disease, if seen in time and properly treated, may, in the large majority of cases, be completely cured; whereas, if it is not properly treated, it is liable to run on to the damage of the cornea, if not destruction of that important part of the eye, with irremediable blindness.

The proper treatment is simple; nothing, indeed, more simple. But picture to yourselves the position of a young practitioner who helplessly witnesses the eyes of his infant patient running on to destruction, and remembers that he never took the trouble when a student of the hospital to prepare himself for such an emergency by lending a hand in the manipulations necessary in the treatment of cases of ophthalmia neonatorum.

You will observe that the diagnosis is obvious, and that, as regards treatment, it depends merely on the practical tact you can bring to bear in the application of the local remedies whether you shall be successful or unsuccessful in curing your case.

Of the liquids which you will see dropped into the eyes of our patients, a solution of the nitrate of silver and a solution of the sulphate of atropia are those in most common use. The nitrate of silver solution—five or ten grains to the ounce—is one of the most efficacious applications in inflammations of the conjunctiva, though, let me remark, it is not the sole remedy at our command, for other irritating substances do nearly, if not quite, as well. Besides the drops which we apply ourselves at the hospital, we give the patients weaker solutions to use at home as lotions. The atropia lotion which we give is of the strength of one grain to eight ounces. We never give a nitrate of silver lotion. We give a weak solution of some other irritant, such as the bichloride of mercury of the strength of one grain to eight ounces, or alum, sixteen grains to eight ounces. The reason we do not entrust the patient with a nitrate of silver solution is that when its use is injudiciously prolonged, as it is liable to be under the circumstances, the conjunctiva becomes dyed by it of a dirty-olive hue. Though you will see the nitrate of silver or other irritating solution dropped into the eye in cases of inflammation of the conjunctiva, you will never see it dropped into the eye in cases of iritis or other internal inflammations of the eyeball, for in such cases irritating collyria do more ill than good. In cases of iritis you will see the solution of the sulphate of atropia dropped into the eye, not, however, with the expectation of subduing the inflammation of the iris, such as we have of subduing the inflammation of the conjunctiva when we drop the nitrate of silver solution into the eye in a case of catarrhal conjunctivitis. The principal object we have in view, when we drop the atropia solution into the eye in a case of iritis, is to counteract, as far as possible, the strong tendency which the pupil has, in the course of that inflammation, to become contracted.

But how are we to distinguish between conjunctivitis and iritis, you may perhaps desire to ask, in order to know when to drop in the nitrate of silver solution and when to abstain, but to drop in the atropia solution? My answer to such a question would be in the words with which I commenced this lecture, viz.:—"If you take the pains to examine for yourselves the cases which come under treatment in the ophthalmic department of the hospital and watch their progress, you will soon learn to recognise the principal forms of eye disease and the remedies employed for them." If you will but study clinically the nature and treatment of the purulent ophthalmia of new-born infants, catarrhal conjunctivitis, scrofulous ophthalmia, and iritis, you will find in the knowledge you thereby acquire of these forms of eye disease a foundation on which you may at leisure successfully erect the superstructure of whatever else the exigencies of practice may render it necessary for you to know respecting ophthalmic medicine and surgery.

At the Eye Infirmary you will have the opportunity of seeing performed the various operations on the eye. But let me observe that though it is of great importance that you should witness the operations, it is also of great importance for you to watch the progress of the case after the operation; and of equally great importance, moreover, it is to have examined the case before operation, and made yourselves acquainted with its pathology and the reasons for operating. Every now and then patients present themselves with injury of the eye of various degrees of severity, ranging from the case in which there is merely complaint that something has got into the eye to cases in which there is an actual wound, even smash of the eyeball. In the case in which something is in the eye, the foreign particle you will usually see discovered adhering to or embedded in the cornea; and if not there, you will most probably see it discovered on everting the upper eyelid adhering to the palpebral conjunctiva. In a case in which there is a wound or smash of the eyeball, it may be that you will see us cut out the whole damaged organ at once. One principal reason for performing this operation of enucleating the eyeball is to guard the other eyeball as far as possible from the risk of becoming affected with destructive sympathetic ophthalmitis, to which there is a great liability under the circumstances.

By even a short attendance at the Eye Infirmary the various points I have now touched on will become familiar in your mouths as household words, so that you will be able to understand what I may have to say more in detail in subsequent clinical lectures. Until a few years ago crowds of ear patients used to invade the ophthalmic department of the hospital. In commiseration I did not turn them away, though they necessarily cost me much additional labour. Of late, however, Mr. Barker has undertaken the task of looking after such cases. But the truth is, we cannot altogether exclude cases of disease of the ear from our attention at the Eye Infirmary, even if we would, because ophthalmic patients are often found to be at the same time labouring under some affection of the ears—for example, in children with scrofulous ophthalmia there is often chronic inflammation of the membrana tympani, with dis-

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charge from the ears. The most remarkable example of a connexion of disease of the ears with disease of the eyes is the supervention, in cases of keratitis or kerato-iritis from congenital syphilitic taint, of inflammation of the membrana tympani and lining membrane of the cavity of the tympanum with sometimes inflammation of the labyrinth attended by great and obstinate deafness.

In a large proportion of cases diseases of the ear are not very amenable to treatment—not by any means so amenable to treatment as diseases of the eye; but still there are some in which, when the disease is taken in time and treated on sound principles, much may be done for the patient's benefit.

In the course of practice you will often be called upon to attend a case of earache, for example. This means, pathologically speaking, acute inflammation of the membrana tympani. Now, in such a case you may quickly subdue the inflammation, relieve the patient from the excruciating pain he is suffering, and save him, perhaps, from subsequent confirmed deafness. The treatment from which such a very desirable result may be obtained is similar to that which you will see so beneficial in analogous cases of eye disease—viz., leeches behind the ear, hydrarg. c. creta and belladonna powders, with warm fomentations.

Last session I gave a special clinical lecture for the purpose of showing how the pathology and treatment of the diseases of the ear may be elucidated by a reference to our better knowledge of the pathology and treatment of the diseases of the eye. The lecture was printed in THE LANCET, Oct. 25th, 1879, p. 601, and I beg to refer you to it.

ABSTRACT OF

The Brown Lectures.

FURTHER INVESTIGATIONS ON ANTHRAX AND ALLIED DISEASES IN MAN AND ANIMALS.

BY PROF. W. S. GREENFIELD, M.D., F.R.C.P.

LECTURE II.

IN undertaking experiments with the view of preparing an artificial virus of anthrax, which whilst capable of affording sufficient protection on inoculation should not manifest such severity in its action as to endanger the life of the animal inoculated, Dr. Greenfield had, in common with many others working at the same subject, believed that so long as the anthrax bacillus maintained its morphological characters, and ordinary powers and mode of growth, it would still preserve the power of producing the disease on inoculation. He therefore sought to maintain a supply of the virus by artificial means rather than by the continuous inoculation of animals; the cultivation method employed being that in tubes partially filled with an albuminous fluid, preferably in aqueous humour. He soon found that these cultivations, though apparently identical in characters and mode of growth, were not of equal potency, and could not constantly be relied upon to produce the desired result. This was not due to admixture of other organisms or failure in the cultivation; and observations were made to determine, if possible, to what cause this deterioration was due, and whether there was any actual diminution in the potency of the virus in successive generations, and if without impairing the vitality of the bacillus its disease-producing power could be gradually abated. Cultivations of the anthrax bacillus direct from the blood of a guinea-pig which had died of the disease were repeatedly made through several generations, and each successive cultivation was submitted to rigorous microscopical and other tests. In this way cultivations were made up to twenty-five generations without any difference being detected in the mode of growth, or the morphological characters of the organism; the regular steps of growth and formation of spores taking place with the greatest regularity as to character and time, the sole perceptible difference consisting in the greater freedom of growth as the successive cultivations proceeded. The following is a summary of the results observed in rodent animals inoculated with the successive cultivations made in this way. With the first, second, and third cultivations the effects are almost, if not quite, as severe and fatal as in a direct inoculation from one animal (guinea-pig or mouse) dead of anthrax into another. It is from about the fourth cultivation that diminished virulence is first perceived, the effects being slower and less certain, although usually fatal sooner or later, and in the case of the fifth cultivation death may not occur for one hundred hours; between the sixth and eighth the result, even with an increased quantity, is less certain, and in some cases the material proves innocuous. From this point onwards the toxic effect is but little marked, sometimes considerable quantities being used with impunity. The latest period at which results were obtained was with the fourteenth cultivation, and then only in mice, and with marked differences in the condition produced from that seen with the earlier cultivations. Having described the results of some of the experiments illustrating the above statements, Dr. Greenfield said that some peculiar effects were observed with some of these inoculations—viz., the production of much slower death, apparently by a sort of chronic anthrax poisoning, with the presence of bacilli only in certain parts, especially in the lungs and pleural serum—a fact of importance in reference to woolsorters' disease.

The results in bovine animals (see Lecture I.) are strictly analogous with those obtained upon rodents, allowing for the greater power of resistance of bovine animals to the virus. No symptoms were produced with any cultivation later than the fourth, whilst in every case marked effects occurred in animals not previously inoculated when the first, second, or third cultivations were used. Moreover, the effect of inoculation with actively growing cultivations of the generations later than the seventh, was practically *nil*, and did not confer any appreciable degree of protection upon the animal so inoculated. It must be noted that in bovine animals there is not only a greater power of resistance, but also a varying degree of relative insusceptibility.

As to the possible contamination of the cultivations by other organisms, he remarked that in his later experiments he had rarely noted the presence of any other organisms, though of course they might be accidentally introduced. Of the organisms which might gain admittance micrococci were by far the commonest; bacterium termo had been only once observed. But wherever other organisms were present, they would not only be discovered by the tests to which each tube was submitted, but in the case of micrococci the changes produced in the fluid were often visible with the naked eye, owing to the opalescence they produced. Whenever other organisms were detected, the tube was thrown away and other pure tubes used. But had it not been so, further pure cultivations would not have been attained unless the micrococci had died out, although their presence does not prevent all growth of the bacilli. Further (as would be shown by microscopic specimens and photographs), great care was taken to obtain evidence that in their physical characters there was no real diversity between the bacilli of the earlier and those of the later cultivations; and it would be absurd to suppose that in every one of the numberless instances there should be invariably introduced, at a particular stage of the cultivation, another bacillus identical with the anthrax bacillus, which it entirely displaced; whilst in no cultivation of other bacteria did it ever show itself. He wished, however, to guard against the possible misconception that because the results found in this particular method were such as described they would therefore necessarily be the same with other cultivation methods and the use of other quantities of the material for inoculation. Buchner's experiments show beyond doubt that the virulence is longer maintained when the cultivations are made in meat infusion, and possibly in other fluids it may be still longer. And larger quantities of material inoculated may possibly produce more marked effects. Indeed, the poison may be readily intensified in the living body. If an animal dies of anthrax of modified form and slow course, and another be inoculated from it, the latter usually dies more rapidly, and the next in succession still more rapidly, so that by cultivation in the animal body the maximum potency of the virus may be speedily regained.

Dr. Greenfield then proceeded to discuss the remarkable experiments made by Dr. Hans Buchner at Munich, and lately brought under the notice of the profession in England

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by Professor Lister, and the bearing they had upon the relation of the anthrax bacillus and the bacillus of hay infusion, and of his ultimate success in causing the hay bacillus to grow in the blood until he obtained by inoculation of a considerable quantity of the material a disease analogous to anthrax with bacilli in the spleen and blood; that it could be inoculated upon other animals, and with each become more virulent until typical rapidly fatal anthrax was induced.

The late investigations of M. Pasteur upon "fowl cholera" were next considered. Fowl cholera is widely prevalent in France, highly fatal, consisting in a form of blood-poisoning, probably not arising from direct contagion, but by means of the excreta of diseased birds becoming mixed with the food, and inoculation through the alimentary canal. It has no analogy with human cholera, and probably is only one of a number of fatal epidemic diseases of this class among poultry. Its dependence upon a microphyte belonging to the class of micrococci was discovered by M. Perrencito of Turin, and subsequently investigated by MM. Pasteur and Toussaint. M. Pasteur announced to the Académie des Sciences that he had succeeded in cultivating the organism in neutral urine, and in decoction of fowl's muscle, and that by a peculiar method he had obtained it in the form of an attenuated virus, which if inoculated into fowls rendered them insusceptible of the effects of the most deadly virus. M. Toussaint by many experiments endeavoured to prove the identity between fowl cholera and septicæmia; but although suggestive of a close relation between the two diseases, Dr. Greenfield did not think them conclusive in establishing their identity.

M. Pasteur found that cultivations of the organism forming the virus of this disease decreased in potency the longer they were kept, if in contact with pure air, the rapidity of death being lessened and the disease remaining more local, the longer the interval between the time of inoculation and the time at which the cultivation of the virus was commenced. He pointed out that these changes occur in a very variable manner, some cultivations becoming greatly attenuated after three or four months; others much longer; and sometimes the parasite dies. There is no morphological difference to be seen between the less and the more virulent condition of the bacterium. If cultivations are made at short intervals of time of each successive virulence each maintains its own degree of intensity, and an interval which will kill a more attenuated virulence will only modify the more intensely virulent. He attributes this modification to the slow action of oxygen on the parasite; for if the tubes containing the virus and cultivating liquid be hermetically sealed, the virus will develop in proportion to the quantity of oxygen contained in the tube, and will retain its original virulence for long periods; but if the cultivation be exposed freely to the air there is a gradual diminution, even to extinction, of the strength of the virus.

But, Dr. Greenfield asked, may not these results be due to vital phenomena rather than external influences? When the access of free oxygen is prevented, the growth of the bacteria is continued to a certain period, at which the oxygen is exhausted; it then remains (in the case of bacillus anthracis with formation of spores) quiescent, the fluid having undergone hardly any chemical change. If new oxygen is supplied, fresh growth will occur. On the other hand, when there is free access of oxygen from the first, all the pabulum can be exhausted by the successive growth of the fungus, which continues to multiply until its food-supply is gone. It has thus no longer the power of forming a healthy and well-developed brood which can remain quiescent until called upon for further activity, but either destroys itself in the process, or is vitally deteriorated. In the resting stage probably the vital changes in the organism are very slow. Again, bacteria in their growth not merely produce chemical change in the fluids in which they develop, rendering them alkaline, but a certain quantity of a material prejudicial to their own life is also generated. And an exhaustive overgrowth of the bacteria must generate a larger quantity of this substance, which may in the presence of oxygen lead to further chemical changes in the fluid. Apart from this, the conditions of growth in the two cases are, as regards the vital activity of the fungus, totally distinct, and this difference should be borne in mind in estimating the result on its future condition.

Dr. Greenfield is, then, inclined to attribute these modifications to conditions which are common to the whole cycle of plant life rather than to mere chemical action, a view substantiated by other facts. For whether the action of the pathogenic bacteria be regarded as dependent upon some virus excreted by them in their growth, or upon some direct influence exerted by them, all analogy warrants the belief that these are largely governed by the vital activity of the organism and the soil and surroundings which condition its growth. Thus may be explained the differences observed in the results of cultivations in various media, as well as the effects when inoculated. If an organism be grown in any particular medium for a certain number of generations it must become more or less habituated to the medium, and it is not strange that on its transference to another medium it will not take an active growth until it is rehabituated to it; and conversely, when growth in any particular medium is well established, it can often be carried on with far great ease in successive generations than at first; it is, in fa acclimatised.

These facts, then, instead of militating against the view that the bacillus is the essential virus of anthrax, or the micrococcus that of fowl cholera, are strongly in favour of it, for they show that the condition of disease-production is the power of healthy and active growth of the parasite in the body, and the conditions which lessen or prevent the disease those which impede or check that growth, and the aim should be to modify the parasite by cultivation rather than allow it to fall into decadence or death from a sort of wilful neglect.

In conclusion, Dr. Greenfield described the methods of cultivation adopted by various observers, and exhibited various forms of apparatus used for the purpose.

ON THE ACTIONS AND USE OF CERTAIN REMEDIES EMPLOYED IN BRONCHITIS AND PHTHISIS.[1]

BY T. LAUDER BRUNTON, M.D., F.R.S.

IN both bronchitis and phthisis the first symptoms that attract notice are cough and expectoration, and the first remedies that claim our attention are the so-called sedatives and expectorants. Cough consists in deep inspiration, closure of the glottis, and violent expiratory effort, by which the glottis is forcibly opened by the compressed air, which carries with it, in its exit, mucus or other matters which may have lodged in the lungs or respiratory passages. The nervous centre for this act lies in the medulla oblongata. It is bilateral, and situated on each side of the central raphe. It is excited into action reflexly by irritation of the respiratory branches of the vagus distributed to the glosso-epiglottidean folds, to the whole interior of the larynx, to the trachea, especially at its bifurcation, and to the bronchi, and the substance of the lung itself, as well as the pleura when it is inflamed. Irritation of the internal auditory meatus at the point to which the auricular branch of the vagus is distributed also causes coughing, and so also may irritation of the liver and of the spleen. As coughing is a reflex act, excited by irritation applied to a sensory nerve, and reacting through a nerve centre upon the respiratory muscles, it is obvious that it may be lessened, either by removing the source of irritation or by diminishing the excitability of the nervous mechanism through which it acts. Both methods are employed in medicine. One of the commonest is that of lessening irritation by the use of glutinous and saccharine substances. These have in themselves little or no action upon the nervous mechanism. They do not pass down to the bronchi, or lung substance, so that they can have no direct effect upon the mucous membrane there, nor have they, so far as we know, any effect upon them after they have been absorbed into the blood; and yet one of the commonest observations is that glutinous and saccharine substances have a very great power to allay cough when applied to the back of the throat, even in cases where we know that inflammation and consequent irritation exist in the respiratory passages below the glottis, at a point which the mucilaginous substances cannot reach. The probable explanation of this action of such substances as marsh-

[1] Read before the Medical Society of London, Dec. 19th, 1880.

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mallow lozenges, jujubes, consisting of gum and sugar and Spanish liquorice, is that the irritation which occasions the cough exists at the root of the tongue and around the fauces, as well as in the trachea, bronchi, or lungs, the combined irritation rendering the cough worse than either the one or the other alone would do; and, therefore, if we soothe the tongue and fauces we relieve the cough, even though the irritation in the bronchial tubes or lung may remain as before. The power of such substances as those mentioned to relieve cough depends, no doubt, to a great extent either on their covering the inflamed and irritable surface directly with a mucilaginous coat, and thus protecting it from the action of the air or from irritation by other substances passing over it, or by exciting an increased flow of saliva or mucus, which has a similar effect. At the same time we cannot deny the possibility of their having other actions, though with these we are at present unacquainted. The use of the mucilaginous substances containing opium or other sedatives, which we know under the name of "linctus," is a more complicated one. In them we have the soothing action of the mucilaginous compound, combined with the local sedative action of morphia, chloroform, or hydrocyanic acid upon the inflamed or irritable mucous surfaces at the root of the tongue and back of the throat, and this renders even their local action more powerful than that of a mucilaginous substance alone. Such drugs as opium, hydrocyanic acid, and chloroform have a certain amount of local action upon the peripheral ends of sensory nerves, and lessen their sensibility to impressions. When they are applied to the ends of the nerves only for a very short time, as they are when we swallow these drugs in a liquid form, their local action is comparatively slight. It is much greater when they are taken in a mucilaginous vehicle, which, adhering to the irritated mucous membrane over which it passes, keeps the sedatives in contact with it for a longer time, and thus allows them to exert a more powerful action. But the sedatives which we give to relieve cough are not unfrequently administered in the form of solution, and then, though their local action must be comparatively slight, they still lessen a troublesome cough. Their action here is a different one from that which we have just discussed, but it is possessed by the sedative whether given in the form of linctus or of solution. In either way it is swallowed by the patient, absorbed from the stomach and intestines into the circulation, and carried by the blood to the medulla oblongata, and also to the inflamed mucous membranes, in which the blood circulates freely, just as well as in other parts of the body, although here its action is likely to be very much less than if it were applied for a length of time directly, as in the shape of the linctus; but, as we have mentioned, the linctus can only be applied to the back of the tongue and throat, and the source of irritation of the afferent nerves may be in the bronchi or in the lung itself. Here, no doubt, a linctus cannot penetrate, but we may to a certain extent act locally upon the nerves by the use of spray and inhalation. Some of these, such as the vapour of conium and the vapour of hydrocyanic acid, are intended to lessen the irritability of the sensory nerves in the respiratory passages, and thus lessen cough. Others, such as the spray of ipecacuanha, and inhalation of essential oils and terebinthinous substances, have probably a different action, and do not lessen the irritability of the sensory nerves in the respiratory passages, but alter the nutrition of the mucous membrane in such a way as to diminish the irritation which the abnormal condition of the membrane exerts upon the nerves. When the irritation is situated in the larynx, as in cases of laryngeal phthisis, one of the best means of relieving it is by applying the sedatives locally, whether by means of a brush, or, what is perhaps still better, by blowing it, in the form of a powder, directly upon the irritated surface. A useful application in laryngeal phthisis consists of a mixture of morphia and starch, in the proportion of about one-sixth of a grain of morphia to two grains of starch. This mixture is introduced into a glass tube, of a proper shape, and is blown down the throat at the instant that the patient takes a deep inspiration. The powder is thus distributed over the interior of the larynx, and exerts its local sedative influence upon the irritated surface, as well as a general sedative effect upon the central nervous system after its absorption.

This brings us to the second mode in which sedatives relieve cough. After their absorption into the blood, in whatever manner they may have been applied, they are carried to the medulla, and there lessen the excitability of the nerve centre through which the reflex act of coughing is produced. In large doses their sedative effect may be so great as to endanger life, and the caution is given in every text-book, and by every teacher, that respiratory sedatives such as opium should be carefully administered to persons suffering from bronchitis with profuse expectoration, lest the irritability of the medulla should be so far diminished that it will no longer respond even to a powerful stimulus from the lungs, and the secretion may consequently go on accumulating until when the patient awakes the respiratory passages are so clogged with mucus that no effort which he can make is sufficient to clear them, and he dies of suffocation. By administering them in smaller quantities, however, the effect of respiratory sedatives may be graduated so as to diminish cough without any risk of causing death, and their effect would be exceedingly beneficial if they acted only upon the respiratory centre. Unluckily, however, this is not the case, and the most powerful of all—viz., opium—not only influences the respiration, but the digestion. It diminishes the cough, but sometimes, also, it diminishes the appetite, and may interfere with the proper action of the bowels. When this is the case, we are obliged carefully to steer between two dangers: (1) the injurious effects of the cough itself, and (2) the injurious effect of disturbed digestion. If we leave the cough alone, it exhausts the patient, for the muscular exertion involved in a violent fit of coughing is very considerable indeed, and the muscular effort exerted by a patient with a bad cough during the twenty-four hours is really more than equivalent to that of many a man in a day's work. Nor is this all. Anyone who watches the face of a patient during a violent fit of coughing will see the skin become flushed, and then dusky; the veins in the forehead and in the jugulars swell up, and become so tense that they seem as if about to burst; so that there is both venous engorgement and interference with the respiration. But what we see in the face takes place elsewhere. The same tension which we see in the jugulars is also present in the right side of the heart, in the vena cava, and in the portal system; for the portal vein has no valves, and the increased tension is transmitted backwards to the veins of the stomach, spleen, and intestines. By-and-by this all begins to tell upon the heart and upon the digestive system, as well as, to some extent, upon the kidneys. The stomach becomes congested, and we have loss of appetite, nausea, and vomiting. The patient, too, is kept awake, and we have nervous exhaustion, or loss of sleep, added to the weariness caused by the muscular exertion, and to the depression occasioned by digestive disturbance. These are what we have to fear: on the one hand, continuous coughing; on the other, we must avoid the digestive disturbance produced by our sedatives; and the duty of the physician is, so far as possible, to relieve the cough without disturbing the digestion. Numerous combinations have been devised, and are found to be, empirically, of very great service. If we take one of them and attempt to analyse it, we shall find that its components are such as to diminish the excitability of the respiratory centre, and at the same time to lessen the injurious effect of the sedatives upon the stomach. Such a one is the following mixture:—Solution of hydrochloride of morphia and dilute hydrocyanic acid, of each eighteen minims; spirit of chloroform and dilute nitric acid, of each one fluid drachm; glycerine, three fluid drachms; infusion of cascarilla or infusion of quassia, two fluid ounces: a sixth part to be taken three or four times a day.

In this mixture, which in its essence was much used by the late Dr. Warburton Begbie of Edinburgh, to relieve the cough in phthisis, we find the sedatives morphia, hydrocyanic acid, and chloroform, to lessen the excitability of the respiratory centre; we find glycerine, which will tend to retain the sedatives for a longer time in contact with the back of the throat, and will also act to some extent as a nutrient. We have combined with these nitric acid and infusion of cascarilla or of quassia, which have so-called tonic (?) action upon the stomach. In what this effect precisely consists we cannot at present say, but we may imagine that it will in some way partially counteract the effects of the congestion which the cough produces, and at the same time we know that they have the power of exciting appetite, and they will thus in a great measure counterbalance the injurious effects of the morphia upon digestion. Nor is this all, the nitric acid, as I shall shortly have to mention, has a very definite effect indeed upon the secretion in the lungs themselves; and this brings us to the consideration of another part of our subject—viz., the effect of drugs upon the secretion and nutrition of the lungs, by

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which they tend to restore the healthy condition of the bronchial and pulmonary tissues, and thus diminish coughing.

First of all, then, we must consider those drugs which lessen congestion. If a person, hastily eating or drinking, gets a crumb of bread or a drop of fluid down the larynx, or into the wrong throat, as it is termed, he suddenly begins to cough violently, and the cough continues until the source of irritation has been removed. If the irritation has been violent he may give a few coughs after the crumb has been coughed up, although the primary source of irritation—namely, the crumb—has disappeared; but the congestion which it occasions still remains for a short time, and acts as an irritant. If a person suffering from disease of the mitral valve makes any sudden exertion he is very likely to bring on a cough, which, however, quickly subsides after a short rest. The cough here is not due to inflammation of the mucous membrane, but simply to congestion, and when the congestion disappears the irritation goes with it. In cases where we have inflammation of the respiratory vessels actually present, as in persons suffering from bronchitis, the congested condition of the membrane is a source of considerable irritation, and we frequently notice that such persons, on going out into the cold air, may cease to cough, but again begin to cough violently when they return from the cold air into the warm room. The reason of this is that the cold air has acted upon the congested vessels of the respiratory passages in a somewhat similar way to what it does upon the vessels of the face; it causes them to contract, and the congestion being thus diminished the cough is lessened. When the patient goes into the warm room the face, which may have been pale while he was exposed to cold, flushes up with the heat, the vessels of the respiratory passages also become engorged, and the increased congestion causes irritation, bringing on the cough. In other cases, again, we notice that, just as the face becomes pale when exposed to cold, it shortly afterwards becomes flushed, although the application to cold continues. A person suffering from bronchitis, on going into a cold room, will begin to cough violently, the cold here increasing instead of diminishing congestion.

The pulmonary capillaries have great contractile power. Ten years ago I made some experiments, which I have not yet published, on the subject. I found that on the application of cold to the lung of a frog, when placed under the microscope, the capillaries would contract to two-thirds of their former diameter. We have, however, very few observations on the action of drugs upon the pulmonary circulation, the difficulties in the operative procedure being very considerable. I have observed that muscarin appears to have a power of contracting the pulmonary vessels, and that this effect is abolished by atropia. I am unaware, at present, of any other observations on the action of drugs upon the pulmonary circulation. Circumstances have prevented me from studying the recent researches on this subject in the way I should have wished, while drawing up this paper. From its power of contracting the vessels in other parts of the body, we should expect that digitalis would have a similar action upon the lungs; and we find, in looking over Beasley's "Book of Prescriptions," that digitalis has been used in pulmonary affections—as for example, in the following draught, employed by Sir A. Crichton in acute phthisis: lemon-juice, half an ounce; carbonate of potash, to saturation; decoction of sarsaparilla, ten drachms; tincture of digitalis, ten to thirty minims; acacia mucilage, ten drachms: to be taken every sixth hour. In such a prescription as this we have the tincture of digitalis, which will, in all probability, by contracting the vessels, diminish the pulmonary congestion and lessen cough. It is combined with carbonate of potash, and the effect of potash upon the lungs is very marked indeed. For my knowledge of its action I am indebted to Dr. Andrew Clark. Its action is perhaps best noticed in a patient suffering from consolidation and softening of a limited portion of one lung. When such a patient is in ordinary health, one may observe, on a stethoscopic examination, crepitant râles, limited to one spot. When he catches cold, one may hear, in addition to those, dry râles extending for some distance around the irritated spot, and the cough at the same time becomes more frequent and troublesome, while there is very little, if any, expectoration. If potash be now given alone, or, still better, in combination with a vegetable acid, the dry râles subside, and are replaced by moist ones, which in the course of a day or wo, as the potash is continued, alter in character, giving one the impression of their being caused by less viscid fluid. At the same time the expectoration becomes more copious, and the cough less frequent and less troublesome. Now is the time to alter the treatment, and for the potash to substitute nitric acid. If this be given too soon the cough, which had begun to get easier, will again become drier and harder, but if it be administered at the proper moment the cough becomes still less troublesome, the expectoration diminishes, and the moist râles disappear from the neighbourhood of the consolidated part of the lung, although they may still remain, as before, in that part itself. Potash, then, has a very marked effect in rendering the pulmonary secretion more fluid and abundant, while nitric acid has an opposite effect. As in many cases we wish to diminish the secretion rather than increase it, it is nitric acid rather than alkalies which we employ for long periods in the treatment of phthisis, as we have already seen in the modified formula of Dr. Begbie's phthisis mixture.

One of the most powerful expectorants is simply a little warm food in the stomach, and in cases of chronic bronchitis, in which the patients complain of violent coughing immediately after rising, one of the best expectorants is a glass of warm milk, either with or without a little rum, and a biscuit or a piece of bread about a quarter of an hour before they get up. A little warm beef-tea will have a similar effect. After taking this for a short time they generally tell you that the sputum comes away much more easily than before, and they are not so much exhausted by it. But perhaps the remedy, *par excellence*, not only in cases of phthisis, but in chronic bronchitis, is cod-liver oil. Persons suffering from long-standing chronic bronchitis will often come to a hospital to beg for cod-liver oil, saying that it eases their cough far more than any cough mixture. Other oils or fats have not this power to the same extent as cod-liver oil. We cannot say positively what the reason of this may be, but I think there is no doubt about the fact. My own belief is that cod-liver oil is more easily assimilated than other oils, and not only so, but more easily transformed into tissues themselves. Whether it owes this property to its admixture with biliary substances, or to its chemical composition, we cannot say. In his book on "Fat and Blood, and how to make them," Dr. Weir Mitchell quotes a remark made by an old nurse, that "some fats are fast, and some fats are fleeting, but cod-liver oil fat is soon wasted." By this she meant that there were differences in the kinds of fat accumulated under the subcutaneous tissues of men, just as there are differences in subcutaneous fats which accumulate in horses. The horse fed on grass soon gets thin by hard work, while fat laid on when the horse is feeding on hay and corn is much more permanent. Persons fattened on cod-liver oil soon lose the fatness again, and this, I think, points to the power of ready transformation which the oil possesses. Supposing that it does possess this power we can readily see how very advantageous it will be. In chronic bronchitis, and in catarrh and pneumonia, we have a rapid cell-growth, but want of development. The cells lining the respiratory cavities are produced in great numbers, but they do not grow as they ought to do. They remain, more or less, lymphoid cells, instead of developing into proper epithelium. They so rapidly form, and are thrown off so quickly, that they have not time to get proper nutriment, and if they are to grow properly we must supply them, not with an ordinary kind of nutriment, but with one which is much more rapidly absorbed, and is capable of much more rapid transformation in the cell itself than the usual one. This power is, I believe, possessed by cod-liver oil, and to its quality of nourishing the rapidly-formed cells in the lungs in cases of bronchitis and catarrhal pneumonia I believe its great curative power is owing.

The next subject we will consider is the action of some drugs in the vomiting associated with cough. The action of vomiting, like that of coughing, is reflex; the nervous centre for it is also in the medulla oblongata, closely associated with the respiratory centre, and it is excited by various afferent nerves, the chief of them being the branches of the vagus distributed to the stomach. When congestion of the stomach is present, these become irritated, and we get loss of appetite, nausea, and vomiting. Like coughing, vomiting may be prevented by the removal of the irritant. For example, where the irritant is indigestible food, the vomiting ceases after the ejection of the offending substances. When the irritation depends on inflammation of the walls of the stomach, it may be soothed by sedatives having a local action upon the nerves, such as ice and

hydrocyanic acid, or by drugs having the power of lessening the irritability of the nerve centre of the medulla, such as opium. In the chronic vomiting of phthisis, all these drugs may be employed, but there is one other which has been useful in this affection, and which probably has no effect either upon the nerve centre or the nerve ends. This is alum. Its mode of action probably is that by its astringent power it contracts the vessels of the stomach, and thus lessens the congestion and consequent irritation produced by the continued coughing in the manner already described.

GASTROSTOMY; ESTABLISHMENT OF A GASTRIC FISTULA, IN A CASE OF STRICTURE OF THE ŒSOPHAGUS.

BY GEORGE BUCHANAN,
PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF GLASGOW.

(*From notes by J. L. STEVEN, M.B., and J. K. LOVE, M.B., House-Surgeons in the Glasgow Western Infirmary.*)

THE following case is worthy of record; for although the patient died in a fortnight of inanition, the operation itself was performed with success, the patient recovered from the effects of it, the wound healed, and a perfect gastric fistula was established.

The stomach, from long disuse, seemed to have lost much of its digestive and absorbent powers, so that the fluid nourishment which was introduced and retained failed to strengthen the patient. Whether an earlier resort to the operation might have enabled the man to live longer is difficult to say. But the case is another illustration of the fact that an opening can be made with safety into the stomach through the abominal walls.

Wm. B——, aged sixty, a porter, was admitted into Ward III. of the Western Infirmary on Sept. 10th, 1880, complaining of symptoms pointing to obstruction of the œsophagus. His family and personal history, apart from the present illness, are remarkably good. The symptoms above alluded to began in the month of February, 1880, with difficulty in the swallowing of solid food. Gradually this difficulty increased till, in the month of June, he was unable to swallow such substances as oatmeal porridge. For some time after this his diet consisted chiefly of porridge made with pea-meal. Soon, however, nothing but liquids could pass, and his diet was chiefly milk and beef-tea. On admission not even fluids could be swallowed, any attempt in that direction being followed by their regurgitation in a few minutes, or sometimes less, in a frothy condition. During all these months he had been getting steadily thinner, and on admission was very considerably emaciated. At no time was pain or dyspnœa a feature of the case; indeed, apart from the inability to swallow, he made no complaint but of weakness. Dr. Buchanan failed to pass a probang and œsophageal bougie, both of which stuck about half-way down the œsophagus.

No exact weight of patient was taken on admission, but it was evident that, notwithstanding the continued use of nutrient enemata, he was rapidly emaciating. These enemata were commenced on Sept. 20th. His weight on Oct. 16th was 7 st. 5 lb.; on Oct. 18th, 7 st. 2½ lb. The emaciation continuing, Dr. Buchanan decided to operate, and on Oct. 27th gastrostomy was performed.

The operation.—An incision one and a half inches in length was made across the linea semilunaris, about an inch below and parallel to the eighth left costal cartilage. The tissues were divided down to the peritoneum and the cavity of the abdomen opened. The transverse colon was now exposed to view at the lower part of the wound. On the introduction of a pair of forceps in search of the stomach, the anterior wall of that organ was seen on withdrawing the instrument to have been grasped, and the gastro-epiploica artery on the greater curvature, two inches below the part, was seen to be held up. Through the part of the stomach wall thus brought to the opening two acupressure needles were thrust at a distance of one and a half inches apart, and, having been passed through the organ, were again thrust through the wall, and the ends made to rest on opposite sides of the wound. The stomach was now carefully stitched by ten carbolised silk sutures to the edges of the wound, and an incision about an inch in length made through the wall of the organ, between the rows of stitches, with a pair of scissors. A smaller transverse incision was now made, and the resulting corners secured to the lips of the wound in the abdominal wall by stitches. The operation, which had been performed under the spray, now being completed, a large acupressure needle was pushed through a long indiarubber tube, about three inches from one end. This end was then introduced into the stomach, while the ends of the needle rested on the thoracic and abdominal walls. The tube was fixed in this position by lateral strings. The long end of the tube was bent downwards and the wound dressed with antiseptic precautions, drainage being secured by the open tube leading from the stomach. During the three days immediately following the operation the tube was used for drainage purposes, and a small quantity of brownish bilious fluid was collected.

No symptoms due to the operation can be said to have followed, unless perhaps a slight rise of temperature. The maximum temperature did not, however, now exceed 100° F. There was no pain, and no tympanites or other symptom of local or general peritonitis. For a day or two after the operation he was fed entirely by enemata of beef-tea and brandy (usually four or five in the twenty-four hours). On the 30th of October (the fourth day), previous to which the wound had been dressed on antiseptic principles, the dressings were taken off, and the drainage function of the tube changed into a nutritive one, half an ounce of milk and a drachm of brandy being introduced into the stomach. This was continued every two hours during this and the following day, after which the amount introduced was increased gradually, while the intervals of digestion were lengthened till on the 4th of November twelve to fifteen ounces of brandy and milk were introduced in four or five meals during the twenty-four hours.

On the 6th the tube was taken out permanently, and the mouth in the stomach closed by a pad of boracic lint, kept in position by two or three strips of sticking-plaster, the whole being removed when anything was introduced into the stomach by a syringe. On the same day twenty-six ounces of brandy and milk were introduced, and on the two succeeding days this was replaced in part by beef-tea, peptonised fluids, &c.

During all this time, although no untoward symptom had occurred, it was evident that emaciation was progressing in spite of the continued enemata and the feeding by the stomach. The sensations of the patient varied from day to day, but on the whole tended to those of slowly increasing weakness. Occasionally he wandered a little at night; sometimes he was morose, complaining, and easily annoyed, sometimes happy and hopeful in his expressions. On the 7th it became evident that he was losing strength quickly, and rapidly emaciating; and on the 8th of November, the thirteenth day from the date of operation, he died of asthenia, having been sensible to within an hour of his death.

The edges of the wound in the abdominal wall were united to the opening in the stomach within a few days of the operation, so that on removing and replacing the tube there was no tendency to separation of the edges, except at the inner angle, where there was a small slough of the subcutaneous cellular tissue. But this did not extend into the abdomen, the peritoneal surfaces of the stomach and abdominal walls having become adherent very early.

In a post-mortem examination it was found that there was a small oval tumour encircling the œsophagus about two inches and a half above the cardiac orifice of the stomach. The œsophagus passed through the centre of this swelling and was contracted for an inch of its length, so that a probe was with difficulty passed through it, even after the partial softening of the mucous membrane, which occurs soon after death. The upper orifice of this structure was plugged with a grape seed, of which the smaller end was downwards, so that it was fixed like a stopper in a decanter. The tumour was tough and firm, and its intimate structure was that of epithelial cancer.

Glasgow.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.

Mr. James Bentley, late of Cheshunt, bequeathed £1000 to St. Bartholomew's Hospital (of which institution he was formerly treasurer), and £100 to the Samaritan Fund, £500 to the Seamen's Hospital, £200 to St. Thomas's Hospital, and £100 to St. Luke's Hospital for Lunatics. Mr. T. E. Price, late of Stoke Newington, bequeathed £100 each to King's College and the Royal Free Hospitals.

THE SIMULATION OF SOMNAMBULISM.[1]

By CHARLES RICHET, M.D. PARIS.

Is it possible, by having recourse to magnetic passes, by the fixed gaze, or analogous processes, to literally send people to sleep? In my opinion this question is completely answered. It is not so, however, with a large number of enlightened physicians and *savants*, who decline to admit the reality of facts which I regard as incontrovertible. In such a matter they say we have only to do with dupes or their accomplices, charlatans, who trade on public credulity, with simple observers who allow themselves to be abused by trickery, with hysterical girls who deceive and who simulate without any other motives than love of deception and simulation. Sometimes a few condescend to recognise that there may be some truth at the bottom of it. But this truth is so small that it is not really worth the trouble of talking about.

However, the number of sceptics is daily diminishing. During the past year especially very many works have appeared which have dispelled many convictions. But with a scientific fact it is not a question of convincing a few persons; everybody must be convinced. Thus it is necessary, before studying somnambulism, to scrupulously examine the proofs of its reality. Is it an illusion or a verity? Must we seriously accept what *savants* have told us about it, or scoff at their extreme simplicity?

Scientific certainty consists in this:—That the phenomenon observed can be reproduced at will by all those who shall proceed in the same manner as the first observer. Thus, when a chemist declares that chlorine in passing into potash results in the formation of chloride and chlorate of potassium, there is no need to repeat this experiment to be sure that it is the truth. If he who has discovered this reaction be ever so little experienced his word will be believed, certain that a repetition of the experiment will lead to the same result. It is just the same in mathematics, in physics, and to a certain extent in physiology; and proof is obtained by this fact only that it is known one can reproduce at will the same phenomenon under identical conditions. But with somnambulism it is otherwise. I declare, for example, that in making the "passes" for ten minutes over the forehead and head of a young man twenty-five years old I have sent him into a state of somnambulism, and that I have been able to observe in him contracture, catalepsy, hallucinations, &c. It does not follow, however, that another physician acting in the same manner on another young man will, in his turn, see the same phenomena reproduced. It is, on the contrary, very probable that the same result will not be obtained; for somnambulism occurring as in the first experiment is, in man, a very exceptional thing.

It is, therefore, necessary, in demonstrating the reality of facts which are not reproduced as often as one wishes, and which are in themselves so surprising, to seek for proofs which may carry with them, if not certainty, at least conviction. We may have either an absolute nullifying pathognomonic proof, or a collection of proofs, which, taken together, are equivalent to rigid and irrefutable demonstrations.

Now, it is impossible to produce absolute proof. An individual appears to be asleep. Whether he be more or less analgesic, more or less anæsthetic, matters little, they say, since, on the one hand, it is easy to simulate these two symptoms, and, on the other, they are far from being constant in somnambulism. If these modifications of sensibility be taken as absolute criteria, one would be almost certainly led to declare subjects hypnotised who, perhaps, are not so; and, on the other hand, to accuse of bad faith certain persons who are really hypnotised. The closed eyes, the jerking movements of the eyeballs, the fibrillar movements of the eyelids, contractions, hallucinations—all this it is certainly possible to simulate. Who can say that certain hysterics do not practise these manœuvres, with no other motive than the desire of deceiving the physician?

There is then no absolute sign, or rather there is only one, which, however, it is difficult to obtain, and which can only convince a single person—it is, to hypnotise her oneself, and to make her tell on waking, in the presence of trusty witnesses, the recital of the acts she has accomplished during her sleep, and of which the memory has escaped her thought. I have twice employed this measure, once in the case of Miss C——, and a second time with my friend F——. Miss C——, after having been present at an experiment, told me that she was not at all sure of the good faith of the hypnotised person. "What do you see extraordinary in it?" she said. "She has been able to simulate sleep perfectly. I cannot believe in somnambulism until you have sent me to sleep." I proposed to try the experiment on her; she accepted; and at the end of ten minutes was asleep. On awaking, and in spite of my affirmations and the assertions of her friend, Mdlle. D——, who, like her, is studying medicine, she would not believe in her own somnambulism, and almost accused me of having administered a soporific draught. However, she was forced to submit to the evidence, especially on looking at her watch, and on learning that what to her had appeared a minute had lasted an hour and a half. To sum up, there is no absolute irrefutable proof of somnambulism; a person can only be convinced by being himself hypnotised.

Unfortunately this method is not very practicable, and for many reasons; among others because *savants* whom it would be desirous to persuade would be very bad *magnetic* subjects. Besides, one could thus only convince a single person at once. We must therefore have recourse to other arguments.

First, the chief is the absurdity of supposing that all hypnotised persons have simulated sleep. For my part this supposition appears more than ridiculous. Here, for example, are two of my intimate friends, educated and enlightened young people, in whom I have absolute confidence. Must I admit that they have deceived me and have made sport of me? I could not be so unjust to five or six honourable individuals, whom I did not know, as to suspect them of bad faith for anything in the world. Besides, I should then have to believe that the fifty individuals, or thereabouts, of all ages and conditions, whom I have been able to hypnotise, were all without exception, *without a single exception*, knaves and liars. That would indeed be most absurd. The eminent professor of physiology at Breslau, M. H. Heidenhain, relates that he has been able to hypnotise his young brother, a distinguished student at the university. Can one admit that this young man has been acting so as to treacherously abuse the simplicity of his brother, and to make him a vulgar laughing-stock? It will be seen further on that nearly all women are, more or less, susceptible of being hypnotised. That would signify that nearly all women consent to feign sleep. Frankly is such a supposition admissible? Could not one woman be found to refuse this imposture? Two alternatives present themselves, and one is forced to recognise them: either all women are knaves and dissimulators, or somnambulism is a real fact. It will be granted, I think, that the former of these two hypotheses is manifestly absurd.

Second, another consideration should be invoked—viz., the agreement between the phenomena. The facts seen by Luysegur, Deleuze, Husson in France, sixty years ago, were observed by Braid in England about 1840; in Paris in 1860 by M. Broca; by myself in 1875; by M. Charcot and M. P. Richer in 1877; by M. Heidenhain, at Breslau, in 1880; and by so many other *savants*, during a century, in all Europe, that I could not quote all their names. That would be a very strange simulation to be reproduced so often in so long a time, with the same appearances—closed eyelids, fibrillar movements in the muscles of the face, hallucinations of vision and hearing, catalepsy, contracture. How is it that women coming from the country, having never heard the word magnetism pronounced, could simulate that of which they were ignorant? By what divination could a patient, whom I hypnotised at the Charité, and who had never witnessed any somnambulism, behave herself absolutely like a patient at the Beaujon Hospital, who came from the provinces, and whom I hypnotised the very day of her admission? That is a marvellous fact, quite as marvellous as the wonderful phenomena obtained by the professional magnetisers. On one view it should all be simulation, and the first dissimulator (the little peasant Victor, hypnotised about 1800 by M. de Luysegur) having set the fashion of a certain kind of sleep, all the other subjects, whom we believe to have been

[1] By "somnambulism" the author means "hypnotism." In order to avoid confusion the term "hypnotise" has been used for "endormir" throughout this article, although the author never employs the former word.

hypnotised, would only have imitated the fantasy of this little impostor?[2]

Third, let us suppose even that there is fraud, and examine if this supposition can be made to accord with facts. I think I can affirm the contrary; for simulation, as it would be practised, must suppose a profound knowledge of anatomy and physiology. M. Charcot insists strongly on this fact, that if the nerves be pressed the muscles supplied by them contract, at least in certain somnambulists. Thus, by pressure on the facial nerve, the zygomatic muscle and the levators of the lip are made to contract. By exciting the sterno-mastoid muscle it is made to contract; the head then turns to the opposite side. Now, it must require a considerable knowledge of the physiology of movement to know that the sterno-mastoid, in contracting, turns the head to the opposite side. With somnambulists one can by direct incitation cause contraction of the muscles (rudimentary in man) moving the auricle of the ear. Now, this contraction is impossible in the individual when awake. By opening the right eye, one provokes a catalepsy of the right side, in consequence of the double decussation of the optic nerves and the cord. In another hysteric, by opening the right eye aphasia was produced; whilst by opening the left eye no such effect was obtained. Certainly, if this be simulation, one must assume that the patient knows that speech is affected by the left cerebral hemisphere, and that the retina of the right eye is in relation with this hemisphere, whilst the right hemisphere is useless for speech.

All those who have seen hysterical contractures during somnambulism are satisfied that these disorders of the muscular system are not simulated. There is no individual strong enough to preserve voluntarily the contraction of a muscle during a quarter of an hour without one perceiving in it the slightest tendency to weakness or relaxation. Now, the somnambulists maintain their contractures for many hours, and on waking they have no recollection of, no fatigue from, this prolonged and improbable effort. As to the so-called passion-attitudes, when the different emotions of the soul are expressed with an unheard-of fervour, I doubt very much if there be in the world an actor so good as to perform these mimicries with such success as the poor hysterical girls of the Salpêtrière. All somnambulists behave thus; their mimicry is so expressive, their sentiments of ecstasy, of love, admiration, anger, disgust, scorn, menace, are expressed with so striking a vigour, that all those who have witnessed them are convinced that there is no room for simulation.

(To be concluded.)

SALICYLIC SILK AS A SURGICAL DRESSING.

By A. F. McGILL, F.R.C.S.,
SURGEON TO THE LEEDS PUBLIC DISPENSARY.

THE time has now passed when it is either necessary or expedient to discuss the antiseptic treatment of wounds. The success of the treatment is generally admitted by those surgeons who have given it a fair trial, and many are only deterred from using the Lister dressing by the supposed extra trouble which it entails. Any plan, therefore, which we can adopt whereby the practice may be simplified while the principle remains unaffected cannot but aid in leading to the more general adoption of antiseptic surgery.

When a wound of considerable size is dressed antiseptically in the usual manner with carbolic gauze, the dressing must of necessity be changed several times during the first week. If this is not done, the serous discharge, which exudes in large quantity, soaks to the outside. Putrefactive changes ensue, and the case, as it is generally called, "breaks down." The frequent changing of the dressing in the early days after the infliction of a wound, during the time that healing by first intention may be expected, is an unmixed evil. It is probably owing to this cause that immediate healing of wounds treated antiseptically is not of more frequent occurrence. The handling of a wound at a later period when primary adhesions have become firm, or when granulation has occurred, is a matter of little moment. Unfortunately it happens that disturbance is necessitated at the very time when rest is most imperatively needed. If, then, we can use as a dressing some material which will not require to be renewed except at long intervals, we not only increase the patient's chance of a speedy recovery, but lessen very considerably the work and expense of the surgeon. Such a material is, I think, found in salicylic silk. The silk used is the article called in the trade "silk noils." These noils are a waste product, and are consequently of comparatively small value; they are sold for stuffing cushions and chair bottoms. The silk is soaked in a solution of salicylic acid, made by dissolving the acid in methylated spirit and boiling water. After soaking and drying ten parts of the silk should weigh eleven; consequently the silk when ready for use contains 10 per cent. of the acid.[1] Before using it is advisable to tease the fibres asunder; though this is not absolutely necessary, it considerably improves the dressing, making it softer and more absorbent. At the same time its bulk is much increased, and consequently a smaller quantity is required for a dressing. When the silk is adopted as a dressing no antiseptic precautions should be neglected, the carbolic-acid spray and lotion being used in the usual manner. For drainage in large operations I have been in the habit of using the ordinary india-rubber tubes, either wholly or partially removing them at the end of the first week; in smaller wounds, tubes of decalcified bone, catgut threads or fiddlestrings, prepared antiseptically and twisted into a spiral, have been inserted. These last, which are in suitable cases very efficacious, were first suggested and made by my friend Mr. G. D. Todd, a former house-surgeon at the Leeds Public Dispensary; being made of an absorbent material, they possess the advantage that they do not require any change of dressing for the purpose of removal. All absorbent tubes have, however, a common fault—they are not efficient in cases where they are exposed to the pressure of heavy flaps, as any considerable pressure causes them to collapse prematurely. The dressing is usually applied direct to the wound; in some cases where there has been a long incision, a strip of thin muslin or gauze soaked in carbolic lotion has been first applied, covering all the wound except the points where the drainage-tube has presented; over this, silk in large quantities has been lightly bandaged. Wherever the silk has touched the wound it has been usual to dip a small portion in carbolic lotion before applying it. This has been done in deference to Professor Lister's teaching—to destroy any putrefactive germs which might alight with impunity on the non-volatile salicylic acid; but, as any liquid which reaches the germ would at the same time reach and dissolve the acid, it seems improbable that any putrefactive changes would result if this precaution were neglected.

The first dressing applied as directed above is not disturbed for from five to ten days, unless the condition of the patient necessitates an examination of the wound. If the temperature remains above 100° Fahr. it is probable that drainage is interfered with, and an examination of the wound is called for. If, however, proper care has been taken at the first dressing, such an examination will rarely have to take place. The second dressing may be left on for an indefinite time, and will not usually be removed till the wound is entirely or almost entirely healed. I need hardly add that all dressings are changed under the spray. The following cases are fairly typical of many others which have occurred in my practice.

Amputation of Leg.—A woman, aged fifty-seven, had suffered from an ulcer of the left leg for many years; the ulcer extended all round the limb; it had been healed on several occasions, but the cicatrix always broke down a few

[2] Some time ago, when travelling in Algeria, preoccupied with seeking for a proof of the reality of somnambulism, I tried to hypnotise an Arab woman of the negro village of Biskra (an officer, a friend of mine, who knew the Arab tongue, served as interpreter). In a few minutes this woman, feeling her eyelids grow heavy, said to her stupefied companion, "My eyes are closing." "Say, 'By Allah,'" the other advised. "By Allah, my eyes are closing." And, in fact, she soon went to sleep, to the great surprise of all present. Must the influence of the fluids Victor be involved in this case also? At the hospital of La Pitié I have only made one experiment, and I guarded myself against any cause of simulation. The patient on whom I experimented did not know what I wished to do. I told her that I would galvanise her for a disease of the knee from which she was suffering, and, in fact, I had a galvanic battery near the bed. This battery, which the patient thought very active, did not act; yet the patient experienced such somnolence and lassitude that she was forced to close her eyes. As I did not wish to make the "passes," I could not obtain complete sleep; but many times I succeeded in producing very manifest somnolence.

[1] It is manufactured by Messrs. Harvey & Reynolds, Leeds. Mr. Reynolds, to whom I am much obliged for the trouble he has taken in the matter, has recently added one ounce of glycerine to each pound of silk. This fixes the acid, and prevents it from shaking out and causing unpleasant sneezing.

weeks after leaving bed. The patient was a fat, flabby woman, who had partaken freely of spirits. I amputated below the knee, making a long posterior flap; two large india-rubber drainage-tubes were inserted, the limb was covered with salicylic silk, and bandaged on to a piece of Gouche's splinting. On the sixth day the dressing was removed. On the fifteenth day the stump was again examined, and found entirely healed. The patient's temperature reached 99·2° on the second day, but was never afterwards as high as 99°.

Removal of Mamma.—The patient, aged fifty-one, was suffering from a scirrhus of the left breast, accompanied by enlargement of the lymphatic glands in the axilla. The breast was of large size, and the operation an extensive one of its kind. The silk dressing was applied in the usual manner. The first dressing was on the fifth day, when half the drainage-tube was removed. The second dressing on the tenth day was necessary to enable us to remove the remainder of the tube. The wound was all healed, except where the tube had prevented union. The third dressing was on the twenty-first day, when the healing was complete. The temperature reached 100·5° on the second day; by the third day it was below 99°, and never reached it again.

Ligature of the Femoral Artery for Popliteal Aneurism.—An ordinary straightforward case in a man, aged thirty-nine. The aneurism was a small one which had only been discovered a week before operation. The artery was tied with carbolised silk; drainage was insured by the use of three strands of catgut; catgut sutures were used. At the first dressing on the eighth day the wound was healed with the exception of a small superficial sore a quarter of an inch in diameter, situated at the point where the catgut threads emerged. The dressing was reapplied and removed on the fifteenth day, when cicatrisation was complete.

In estimating the value of the new dressing it can be compared (1st) with carbolic gauze, and (2nd) with the salicylic cotton-wool used by Professor Thiersch. Compared with carbolic gauze: (1) It requires less frequent renewal, thereby saving the patient pain and discomfort, and the surgeon time. (2) It increases the chance of a speedy union of the wound by insuring rest in the early days of treatment. (3) It will keep for an indefinite time, whereas the gauze after the lapse of a few months loses its antiseptic properties. (4) It is cheap, and consequently saves the surgeon and patient expense. Compared with the salicylic cotton-wool it is found to possess two great advantages: it is more absorbent and more elastic. Its absorbing properties make it a much safer antiseptic; its elasticity prevents it from caking, and makes it more comfortable.

Leeds.

ADDITIONAL NOTES ON

FILARIA SANGUINIS HOMINIS AND FILARIA DISEASE.

BY PATRICK MANSON, M.D.

I REVERT to this subject in continuation of a paper of mine which appeared in last year's *Customs Gazette* in order to bring forward some evidence lately obtained corroborating unmistakably my conjectures as to the habitat of the parent filaria. Those who have followed these investigations will remember that, reasoning from the position in which I found in certain cases the ova and embryos of the parasite, I concluded that the parent worm lived in the lymphatic trunks. The following are my notes of a case in which I found the mature parasite *in situ*, and in the place conjectured. The parent worm has been found by Bancroft in Australia, Lewis in India, Aranjo in Brazil, but this is the first time, as far as I know, in which it has been possible to state precisely from direct observation the particular structures it occupied. I therefore think the observation of sufficient value to justify its publication.

CASE 57. *Lymph scrotum, filaria embryos in lymph from scrotum, but not in the blood; excision of parts of the scrotum; parent filaria in dilated lymphatic.*—P. M——, aged forty-six, a pedlar and farmer. Four or five years ago he noticed that after much walking he had pain in both groins along the course of the spermatic cords, but he says it was never or very seldom associated with fever. He says he has never had inflammation nor abscess of the scrotum. At first there was swelling of and pain in the groin lymphatics, but on the bursting of a vesicle which had formed on the scrotum, and the escape of much fluid, these subsided. During the first year or two scrotal discharges occurred only once or twice a year; then they became more frequent, and during the last three months the discharge has been nearly constant. It may stop for a day or two occasionally, but as a rule the scrotum drips lymph night and day, perhaps to the extent of ten to fifteen ounces in the twenty-four hours. The discharge, he says, is always clear, like water, and when collected in a bowl, coagulum with red particles and streaks forms rapidly. Has never had chyluria nor any serious illness. He is very thin and anæmic, but, though much debilitated, is in fairly good health.

Oct. 11th, 1880.—Inguino-femoral glands on both sides enlarged, especially those on the right side; they are neither distinctly varicose nor firmly indurated, but have a soft spongy feel. The bulk of the scrotum is only slightly increased, but everywhere on its dusky red-brown surface are scattered innumerable minute vesicles, varying in size from a No. 6 to a No. 2 shot. Pricking any of these permits the escape of a clear watery fluid. As I examine the scrotum, this fluid, oozing from some ruptured vesicles, drips constantly. The right testicle is absent, probably undescended; there is no hydrocele on the other, which feels large and healthy. The under surface of the sheath of the penis is somewhat swollen, but is not vesiculated. The scrotum feels soft and silky. There is no elephantiasis or swelling of the legs. The clear watery nature of the lymph is peculiar. I found, in a short examination of sediment of some drawn at 11 A.M. to-day, one embryo filaria. I collected two other specimens of lymph—one drawn between 4 and 5 P.M., the other at 7 P.M., and stood the three specimens to await resolution of coagulum. Blood drawn from the finger at 7.45 P.M. had no filariæ. I again, at 8 P.M., examined a large slide an inch and a half by one inch, but found no filariæ. The blood is very watery, and defective in corpuscles.

12th.—Examined the sediment of the three specimens of lymph—viz., that drawn yesterday at 11 A.M., at 5 P.M., and at 7 P.M., and found embryo filariæ in all of them, two or three in every slide of sediment. It is evident from this that the filariæ observe no periodicity while they are in the lymph, and that reproduction is a continuous process.

In this case, I believe, the obstruction in the lymphatic circulation of the scrotum is very low down, probably not higher than the inguino-femoral glands, and that it is complete. Because: (1) Had the lymph regurgitated after passing through the glands it would be milky or sanguineous, and be much richer in corpuscles than it is. (2) It is clear and watery, as it is near the radicles of the lymphatics. (3) There is an absence of marked varicosity of the lymphatic glands it first reaches; were the obstruction higher up the lymph circulation these lower glands would be distended by accumulating lymph. (4) Filaria in lymph, but not in blood—proving that the obstruction is complete. I think it probable, considering these facts, that the parent worm is between the surface of the scrotum and the first lymphatic glands, and that we will find it when the scrotum is excised. (This was written before the operation.)

13th.—Removed part of the scrotum this forenoon, the dripping of lymph continuing, and thought it advisable to operate to save the man's life. As he lay on the operating table under chloroform, I could see the anterior border of the spleen bulging out the relaxed and wasted abdominal muscles, and could feel that the organ was very much enlarged. Under such circumstances I generally abstain from all serious operations, but when I remembered the corpuscles and watery state of the blood, the absence of a history of malarial fever, the usual cause of splenic tumour here, the probability that it was the result of the state of the blood, and that this again was caused by the constant day and night dripping of lymph from the scrotum, I determined to proceed. The operation was a very simple affair. I dragged down the affected portion of the scrotum till it was clear of the testicle; transfixed the fold thus formed with a finger-knife; cut upwards and then downwards, removing a circle of about two and a half to three inches in diameter of soft, spongy, watery scrotum. Only three arteries required ligature. Pressing

with the palm of the hand over the right inguino-femoral glands, I forced from an enlarged lymphatic on the upper and right corner of the wound a stream of lymph the thickness of a fine knitting-needle, and with a projection of three to four inches. The lymph thus expressed was clear and watery. I failed to do the same on the left side. The solitary testicle, the left, was healthy. The edges of the wound were brought together with catgut sutures. The scrotum when excised had been placed in a clean bowl, and when the operation was finished, I took it up and carefully examined the cut surface. Finding nothing unusual, I folded it up, intending to examine it at my leisure. However, being curious about my prognostication, I took it up again, and unfolding and exposing the cut surface saw wriggling on it very vigorously a long and slender worm of a catgut opaline look, the thickness of a medium-sized horsehair. One end of the worm was free, the other entered the cut end of the lymphatic corresponding to that from which I expressed the lymph on the right side. About two inches of the worm were free. I tried to coax out the rest with my finger, but failed. The worm appeared to be working back again into the scrotum. Fearing it would succeed in this, and also being afraid to crush it with the forceps, I laid it on the handle of a scalpel when it had partly dried and adhered. I made gentle traction, but the worm snapping in the vessel, I procured only about two inches of the free extremity, with long pieces of uterine tubes and alimentary canal dangling from the transverse fracture of the integuments. I did not attempt any further examination of the scrotum (which contains the caudal end of the female, and probably the male worm), but placed it in spirits and sent it to England. Dr. Bennett, of H.M.S. *Swinger*, was present, and assisted at the operation and saw the worm.

The same evening I examined with the microscope that part of the worm I had broken off. It was the head end of a female. The body was quite plain, without any markings, and tapered rather abruptly to the simple, somewhat club-shaped, mouth. The vagina opened about 1·25″ from the mouth. Uterus was packed with embryos in different stages of development. In the lower part of the uterine tubes the embryos lay at full length, outstretched, as we see them in the blood, and the sheath was very distinct in one embryo that had escaped from the vagina. This particular worm was certainly not oviparous. The following are my measurements carefully made:—Greatest diameter of body, 1-125″; diameter of alimentary canal, 1-900″; diameter of head at shoulder, 1-450″; orifice of vagina from mouth, 1-25″; diameter of body at vagina, 1-125″; ova before differentiation of embryo cleavage complete, 1-650″ × 1-850″; ova after differentiation of embryo, 1-590″ × 1-700″; diameter of uterine tubes, 1-200″; free embryo, 1·95″ × 1-3000″; length of sheath visible beyond the head of free embryo, 1-1400″. The animal was mounted in urine of a specific gravity similar to that of lymph, for examination. In such a medium the parts retain their natural proportions. If mounted in water, glycerine, or spirits, there is often much distortion, and an incorrect idea of relative and actual size produced.

15th.—Doing well. A slide of blood drawn from the finger at 5.30 P.M. contained no filariæ.

16th.—One slide of blood drawn at 5.30 A.M. contained no filariæ.

26th.—Had an attack of fever yesterday, and is still hot. The sheath of the penis is considerably swollen, but otherwise the case is doing well; the wound is granulating kindly, and there has been no escape of lymph since the operation.

Nov. 3.—Wound nearly healed; swelling of penis subsided. Patient, who has been taking large quantities of iron, much stronger; spleen smaller; blood still very defective in corpuscles; one slide drawn at 4 P.M. contained no filariæ.

6th.—Wound healed; no filariæ in the blood; going home to-morrow.

Amoy.

ON Wednesday last Princess Christian opened a new Cottage Hospital on Englefield Green, near Egham. The hospital has been built to accommodate eight adult patients and six children, and has cost about £2500, the whole of which has been raised by the residents in the neighbourhood, the Queen having been a very liberal subscriber to the funds.

THE EFFECTS OF THE INDUCED CURRENT UPON PARTURITION.

BY WALTER J. KILNER, B.A., M.B. CANTAB.,
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IT is not an uncommon occurrence to meet with cases of confinements in which it seems likely that the child will be born in a few minutes, and yet there is a delay owing to the pains being very short, feeble, and at long intervals, although the mother shows no sign of fatigue. In these instances ergot might be of use, but it is not administered because it is expected that before it has time to act the labour would be over. Having met with three similar cases almost consecutively, I came to the conclusion that electricity might be of use, and I think that the results of my observations may interest some of the profession, as I am unable to find any mention of the induced current being used in parturition, except for the purpose of controlling post-partum hæmorrhage.

My first experiments were especially directed to discover whether the pregnant uterus, like the voluntary muscles, possesses *motor points*. After many trials, the conclusion I arrived at is that motor points exist, and can be easily found by bisecting the line drawn from the umbilicus to the middle of Poupart's ligament. This point is approximate, being only applicable before the uterus has descended, to allow the head of the child to enter the pelvis, and the spot varies slightly in each case according to the position of the uterus. When we talk of motor points, we must recollect that the uterine muscular fibres are of the unstriped variety, and that they do not respond to galvanic stimulation so quickly as the striped muscles.

When the poles of the coil are placed upon the spots just indicated the first thing observed is the immediate contraction of the abdominal muscles, the intensity of which depends upon the strength of the current. Occasionally, at the instant of contact uterine contractions commence, but more often a lapse of about a quarter of a minute is required, and not unfrequently they are delayed for two or three minutes. But still the current is taking effect, as the intermittent use, for instance, half a minute on and the same off, rarely fails to induce contractions in a few minutes; these increasing gradually in severity and duration while the intermissions become less and less. Latterly, however, I have applied the current only during the contraction, to obtain the benefit of the relief of pain. The following is a well-marked instance of galvanism producing uterine action:—

CASE 1.—Mrs. A——, aged twenty-nine. Third confinement, Oct. 1879. At 9.30 P.M. the os was very nearly dilated. The membranes were thick, and the child's head was in the first position. The pains were weak, and at intervals of rather more than ten minutes. The membranes were ruptured, and the terminals of the induction coil were placed one upon either side upon the motor points, and the current was only turned on during the pains. After she had three the pains became almost incessant, and they never ceased until the current was stopped. Although the contractions were violent she did not feel them so acutely as before the coil was applied. The child was soon born, and under the influence of the current the placenta was expelled forcibly outside the vulva. She had an excellent getting up, having very few after-pains.

The above case illustrates another frequent occurrence—namely, that *the pains do not cease until the current be discontinued*, but however more frequently, although the pains become very prolonged, yet they stop of their own accord. If it be wished merely to prolong any one uterine contraction, the current is best applied near the termination of the pain, when it will commence *de novo*. In one instance, which will be directly related in full, the induced current did not produce any uterine contractions, although the abdominal muscles did so violently.

CASE 2.—Mrs. B——, aged thirty. First confinement, June, 1879. Labour pains commenced yesterday soon after midnight. This afternoon at four o'clock the os was about the size of a crown piece, and very rigid. I administered an injection of hot water for six or seven minutes, during which time the pains were severe, and in ten minutes from the

commencement of the injection the os was fully dilated. Subsequently the head did not advance further than the lower part of the pelvis, and remained stationary although the pains were strong for three or four hours. About this time the pulse rose to 120 per minute in the intervals, and higher during the pains. I was then allowed to use the coil, and applied a gentle current to the abdomen, avoiding the motor points during the pains. The contractions of the uterus, which were previously every three or four minutes, increased in number to one about every thirty seconds. The most singular effect, however, was that the pulse rate during the interruption after the first pain, during which the current was used, declined to eighty per minute, and for twenty minutes the pulse did not rise above that number. Besides *during* the second pain the pulse fell to sixty beats per minute; subsequently the pulse did not vary either during or between the pains. After twenty minutes it rose to a hundred, and as I came to the conclusion that mechanical interference was necessary, I applied the forceps and delivered her. Another striking effect was that before the current was used the woman was very fatigued and worn out, and every pain tried her much, but immediately upon the application of the galvanism the care-worn expression vanished, and the subsequent pains were not so trying, although she still felt them, but not so severely. Mother and child went on well.

CASE 3.—MRS. C——, third confinement, July, 1879. Soon after midnight, when I saw her for the first time, the os was half dilated. Cranial presentation, first position. The pains had commenced at about 3 o'clock on the previous afternoon, and there was about five minutes interval between them. At 4 A.M. I was called again, the os was nearly dilated. The pains had become very slight, and soon disappeared entirely. Pulse 140. She looked worn out, and complained of faintness, which was the reason I was called. As there was no obstruction I gave a dose of ergot, and applied the coil. Neither had the slightest effect of producing uterine contractions, although the abdominal muscles responded freely. In less than half a minute the pulse rate was lowered to 108, and all the sense of fatigue disappeared. As all the bad symptoms were arrested, I gave her a sedative. Eighteen hours afterwards the pains commenced again spontaneously, and the child was born at 10.40. The placenta was, as in previous labours, entirely adherent. She had a good getting up.

The first consideration we will take will be that of the sensation of pain. In Case 1 this was almost entirely removed by the current, while in Case 2 it was lessened, and in other instances not quoted it continued more or less severe. As we find that the induced current has such a variable effect upon the pain during labour, we think it is impossible to ascribe the whole of it to the sensation caused by uterine contraction, and we think there is another factor usually present which partakes of the character of neuralgia. This conclusion is founded partly upon the fact that the pain is not in proportion to the intensity of the uterine contractions even during the same labour, and partly that when the pain is disproportionately severe, there usually accompanies it other more or less distressing symptoms, such as nausea and vomiting, or the peculiar sinking feeling at the pit of the stomach; and besides, we find that pain is excessive more commonly in weakly women whom we should expect to suffer from neuralgia, rather than in those of a phlegmatic temperament. Of course allowance has to be made for the circumstance that one woman will bear with fortitude the pain which will demoralise another, also for the mechanical difficulties attending the dilatation of the maternal soft parts, and for the relative sizes of the child and mother. If this division be made, it is not more difficult to understand that the induced current will remove the neuralgia attending labour than that it will frequently do the same in other cases, while in no instance in which, when present, was the sinking feeling entirely removed, and I have not as yet met with a single instance of vomiting after the current was applied, although in several it was previously incessant.

As regards the influence of the current upon the pain produced by the second factor—namely, the uterine contraction—it may be stated, in short, that it is slightly diminished. One of the best methods of testing this question is by observing that when the contractions are intensified and prolonged under the influence of faradaism, the woman does not complain of their being more painful; and in one instance I was even begged to discontinue the current because "the pains were no good," although the pressure upon the child, as perceived by vaginal examination, was much more considerable than when the current was omitted.

Very nearly allied to the subject of pain is the constitutional effect of galvanism upon the woman. In Cases 2 and 3 the current was not used until the patient was prostrated, and her pulse rapid. In the former case not only did the fatigue disappear, and the pulse become slower, but the pains were absolutely intensified; while in the latter the prostration was removed, but no uterine contractions could be produced. These are the only two instances I have met with, because the patients in the other confinements allowed the coil to be applied before prostration became manifest.

Faradaism has a very striking effect upon the pulse rate during parturition, having a tendency to equalise it. If the rate be normal, the pulse is slightly quickened both during its use and also during the intermissions. But should the rate be much too rapid, it is lowered, and usually approaches the same number per minute as that to which in the former instance it rises. Taking an average, the number of the pulse beats per minute under the influence of the current is about 90; and this does not alter, as a rule, during or between the pains. It may be mentioned here that the after-pains do not seem to be in any way affected when the current has been used in labour, nor has anything gone wrong in any one case subsequently.

From what has already been stated, it is comparatively easy to say beforehand what patients are the most likely ones to be affected favourably by the induced current—viz., (1) those of a nervous temperament, who are easily excited, and who usually feel pain acutely; (2) those who have sympathetic disturbances, such as vomiting and hiccough; (3) those who require stimulation.

In my opinion, the best way of applying the current is to place the electrodes (each being about three inches in diameter) upon the abdomen over the motor points, these being retained in their proper places by the binder. It is very easy to make flat electrodes of spongio-piline by running through the waterproof covering several wires in different directions. Large electrodes are preferable to small ones, because the same current spread over a large surface is not felt so acutely as when it is concentrated into a small space. For the relief of pain a very mild current is only required, but for the production of uterine contractions a variable strength is necessary.

P.S.—Since writing the above I have used the induced current in forty-one cases. In all there was a diminution of pain, which was well marked in most. With one exception the uterine contractions were increased. In the exceptional case ergot likewise failed, and forceps were necessary on account of uterine inertia. Two women had sickness; one of whom suffered from bronchitis, and retching was induced by her cough. In the rest vomiting and nausea, when present, were almost instantly relieved. In every case the mother and child did well. The after-pains were in no way altered. In one case the current was applied for the relief of false pains ten days previous to her confinement, but was ineffectual.

Ladbroke-grove-road, W.

TWO CASES OF ANGIOMA.

BY EDWARD LAWRIE, M.B. EDIN.,
PROFESSOR OF SURGERY, LAHORE.

IN April, 18—, a well-built, powerful Hindoo presented himself at the Calcutta Medical College Dispensary with a small fibrous tumour over the superior border of the right scapula. It was not attached to the bone, but was not freely movable. On this account I hesitated to operate on it, as the patient wished, in the dispensary; but as there was a crucial cicatrix over the swelling, left by a previous attempt on the part of a barber to excise it, I thought this might be the cause of its want of mobility, and proceeded to perform the operation.

Nothing unusual occurred at first, but with the final sweep of the knife to sever the last connexions of the tumour the most violent hæmorrhage took place I have ever seen. We were quite powerless to stop it till, in a few seconds, the patient fainted. I then managed to apply sufficient pressure to prevent its recurrence until I had held a con-

sultation with my friend Dr. Bovill, who agreed to ligature of the subclavian inside the thyroid axis. When this had been done, with an antiseptic catgut ligature, the pressure was removed. Bleeding recurred, but was at once stopped by crucial transfixion and ligature of the vessels *en masse*. This was an extremely difficult procedure, because of the close and deep relation of the vessels to the mobile scapula. The same cause precluded the application of ligatures in any other way, as well as permanent pressure.

The patient rallied badly after the operation, and died on the third day.

On examination of the tumour and the wound, it was found that an angiomatous mass connected, as it were, the tumour with the soft parts about the upper border of the scapula. The growth itself was solid and fibrous, except at its base, which was occupied by a mass of tortuous dilated bloodvessels. No further post-mortem examination was allowed, and we were unable to satisfy ourselves as to the exact anastomosis which kept up the bleeding after the first part of the subclavian was tied.

This case, though disastrous, was sufficiently interesting, the more so as, within a short period, I had an opportunity of seeing a similar one, in the practice of the late Professor of Surgery in Calcutta, Dr. Gayer. In this instance the tumour occupied the lower and inner part of the thigh, and there was nothing whatever to indicate its angiomatous nature except, as in the first case, a deficiency of mobility. Dr. Gayer attempted its removal. From the commencement of the operation there was free bleeding, notwithstanding the use of Esmarch's appliances; but while the incisions at the base of the tumour were in progress it became so uncontrollable that Dr. Gayer promptly amputated the thigh, as the only possible means of arresting it. The limb was examined, and a large network of immense tortuous vessels was found occupying the base of the tumour, which was otherwise solid.

The extraordinary difficulty of controlling the circulation, which necessitated amputation, was explained by the state of the femoral artery. This vessel was dilated, atheromatous, and extensively ossified, so that not only was there no pulsation in the tumour in the first place, but the pressure of the elastic cord produced no effect on the calibre of the artery and the flow of blood through it during the operation.

Lahore.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium

UNIVERSITY COLLEGE HOSPITAL.

[THROAT DEPARTMENT.]

PARALYSIS OF THE CRICO-ARYTENOIDEI POSTICI OR DILATORS OF THE GLOTTIS.

(Under the care of Dr. POORE.)

G. S——, aged thirty-three, a carpenter, complained that for the last twelve months he had had a feeling "as if he breathed through muslin," and further stated that when he ran or exerted himself the breathing became stertorous. The voice was unaffected. On laryngoscopic examination the laryngeal mucous membrane had a normal appearance. During phonation the cords approximated thoroughly; during inspiration there was no abduction of the cords; the glottis remained a mere chink, and no effort of forced inspiration served to increase the distance between them. During expiration the distance between the cords was much greater than during inspiration. The arytenoid cartilages presented the appearance of being tilted backwards. He stated that sixteen years ago he had "a lump as big as his fist" on the front of his throat, and that one of his sisters had the same thing. This was probably an enlargement of the thyroid body. There was no lump or enlargement of any kind when seen; could swallow without difficulty. When pressure was made upon the posterior margin of the ala of the thyroid cartilage there appeared to be some undue tenderness. There was no evidence of any intra-thoracic tumour; no paralysis of the tongue or palate; no want of laryngeal sensibility. There was a doubtful history of syphilis ten years ago. Patient said he had got thin lately, and looked depressed; suffers from pain under the eyes, and says that for the past three months he has occasionally, when at work, "felt shaky all over, especially in the head and eyes." There is no lead line; no tremor of the limbs; no symptoms of ataxy; no muscular wasting.

Remarks.—This patient was evidently suffering from that rare condition, paralysis of the crico-arytenoidei postici or abductors of the cords. All other muscles of the larynx, the adductors, and tensors, seemed to act perfectly. The cause of the peculiar appearance of the arytenoid cartilages was not evident. The cause of the want of power in the abductors was doubtful. The condition of the patient was more suggestive of hysteria than of any organic disease affecting the origin of the pneumogastric nerves. There was no evidence of any injury to the muscles themselves, or of any injury to the recurrent laryngeal nerves in their course. The patient was given iron and iodide of potassium, and was lost sight of when the hospital was closed for alterations during the past autumn.

PARESIS OF THE ADDUCTORS OF THE CORDS.

This condition, which is the one which gives rise to the so-called hysterical aphonia, is perhaps the most common of all the paralytic affections of the larynx. The paralysis is seldom complete, and therefore the term paresis seems preferable. Two cases occurred in girls aged respectively sixteen and eighteen. They were both completely aphonic, and quite unable to speak above a whisper. They were both anæmic, both suffered from globus hystericus, both were much troubled by vomiting after meals; and in both a furred tongue, with enlarged papillæ at the tip and edges, gave evidence of a condition of gastric catarrh. A laryngoscopic examination showed that the larynx was healthy, but that during attempts at phonation there was scarcely any approximation of the vocal cords, and that of a tremulous, hesitating character. The application of faradaism directly to the larynx was tried in both cases. It produced a momentary monosyllabic cry of discomfort, but no permanent benefit, and its use was not persevered with. The treatment was at first directed towards the relief of the gastric condition by the administration of mercurial purgatives, and this was followed by the treatment of the anæmia. A mixture containing perchloride of iron was ordered, combined with sufficient exercise and a nutritious diet. In both cases the aphonia had completely disappeared at the end of a few weeks.

The third case was that of a boy, aged twelve, who was completely aphonic, and had been previously treated for laryngitis. An examination of the larynx showed an extreme degree of paresis of the adductors of the cords, combined with a very marked anæmia of the larynx. The patient was an anæmic, delicate-looking lad, but the pallid condition of the laryngeal mucous membrane was far greater than that of any other part. It was indeed a real case of what has been described as laryngeal anæmia. He was treated by the administration of cod-liver oil and steel wine, and after a few weeks his voice became normally strong.

Remarks.—These patients are always *aphonic* rather than *hoarse*. Hoarseness is characteristic of thickening or roughening of the glottic aperture, which in these cases is never present, and accordingly we find that true hoarseness is very seldom observed. This form of vocal palsy, although often occurring in hysterical women, seems to be due in most cases to anæmia, and is probably caused by an actual want of muscular power in the adductor muscles. When the anæmia disappears, the voice returns, and it is very seldom necessary to have recourse to local treatment of any kind. The throat should not be coddled, but should be rather stimulated in moderation by the use of cold water. Fresh air is always necessary for these patients, and they should be made to take daily exercise out of doors.

OZÆNA.

In several cases of chronic inflammation of the nasal and pharyngeal cavities giving rise to offensive discharge, Dr. Poore has found decided benefit result from the use of a stimulant and antiseptic snuff having the following formula: biborate of soda, nitrate of bismuth, of each one drachm;

disulphate of quinine, ten grains; iodoform, five grains. This snuff has the effect of stopping the fetor and greatly diminishing the amount of discharge from the nostrils. It is liable, as are all snuffs when used for similar conditions, to cake in the nostrils, and it is therefore necessary to thoroughly wash out the nostrils once a day. This may be done by means of a nasal douche, or the patient may easily be taught to snuff a lotion up the nose and allow it to run out of the mouth. A teaspoonful of glycerine of borax dissolved in a wineglass of tepid water forms an excellent wash for the nose, and with a little instruction patients learn how to wash out their nasal and pharyngeal cavities without the aid either of syringe or douche apparatus. In cases where the ozæna is of a simple kind, not due to caries or necrosis of bone, but rather to a sluggish inflammatory action occurring in a scrofulous subject, considerable benefit is often derived from the administration of the sulphide of calcium in doses of half a grain (in pill), taken three times a day. It is often necessary to cleanse the nasal and pharyngeal cavities with a brush inserted through the anterior nares, and also behind the soft palate, so as to reach the summit of the pharynx. The brush may be moistened with glycerine of tannin, and after the cavities have been cleansed a little dry iodoform may be passed into the cavities on the tip of the brush.

NEWCASTLE-UPON-TYNE INFIRMARY.

EPITHELIOMA OF THE UTERUS.

(Under the care of Dr. PHILIPSON.)

FOR the notes of the following case we are indebted to Mr. E. L. Prowde, M.A.

C. B——, aged thirty-one, admitted May 11th, 1880. She admitted to having lived a dissolute life, and to having suffered from syphilis. Four months previous to her admission she suffered from pains in her loins, shooting round her back and down her thighs. Her menstruation was disordered. This was followed by a discharge, "like dirty-coloured water," of a very foul odour. There were also nausea, loss of appetite, and waste of flesh. On vaginal examination a growth was found of about the size of an apple attached to the cervix, fungoid and soft, and easily broken down with the finger. On microscopical examination of the detritus cancer cells were clearly recognised. On June 5th Dr. J. D. Dixon, the senior house-surgeon, with the écraseur removed the mass. The actual cautery was then applied, and ice was subsequently placed in the vagina. On July 4th, upon examination, it was found that the growth had returned. At this time Chian turpentine was administered internally. On July 24th it was noted that the discharge was not so copious nor so sanguineous, and also that it was not of such a foul odour. At the beginning of August, in consequence of the supply of Chian turpentine having been exhausted, the tincture of the perchloride of iron was substituted, but apparently not with the same beneficial influence as the Chian turpentine. The hæmorrhagic discharge again increased, and the pain also became greater. The pain was somewhat relieved by the hypodermic injection of morphia, and also with the morphia and belladonna suppository. Gradually her strength failed, and she died on Sept. 26th.

At the autopsy, the cavity of the peritoneum was found to contain a small quantity of sero-purulent fluid. The liver was firmly adherent to the abdominal walls by old bands. The pelvis was almost entirely filled with a hard white mass, resembling scirrhus, ascending to the pre-vertebral tissue, embracing the vessels and infiltrating the tissues. The same mass extended into the pelvis, matting together the pelvic organs. Attached to and surrounding the cervix uteri was a mass resembling brain tissue, as large as an orange. The body of the uterus was small, but normal. The left ovary was gristly and larger than natural. The liver presented the appearance of lardaceous degeneration. The kidneys were both large and pale, the capsules being adherent, and on section were found to be infiltrated with small nodules, almost like purulent punctures, collected apparently into groups, rather than being dispersed. The interior of the bladder presented raspberry granulations.

Remarks by Dr. PHILIPSON.—The chief interest of this case was the limitation of the disease to the cervix uteri, the fundus of the organ being normal. The cancerous growth had extended by infiltration to the surrounding textures, there being no secondary formations. The Chian turpentine had appeared to have been of service, the hæmorrhagic discharge having lessened during the time of its administration.

LINCOLN COUNTY HOSPITAL.

IDIOPATHIC ANÆMIA TREATED WITH ARSENIC AND DIALYSED IRON.

(Under the care of Dr. MITCHINSON.)

FOR the following notes we are indebted to Mr. W. J. Cant, house-surgeon.

K. J——, aged twenty-four, was admitted on August 16th, 1880, suffering from extreme pallor, having a peculiar yellow tinge, the mucous membranes looking perfectly white and bloodless. She complained of extreme weakness and slight headache, but otherwise no pain anywhere. There was diarrhœa, with occasional vomiting; but these symptoms did not appear until the disease was far advanced. On examining the organs no organic disease could be detected. The urine was free from albumen and bile, and there was no increase in quantity, nor was there any deposit. Specific gravity 1008. The patient took her food fairly well, and there was no pain after it. She was somewhat emaciated, and there was slight œdema of the legs. On auscultation loud anæmic murmurs were heard in the heart and over the cardiac region. No enlarged glands or spleen could be found. The catamenia were regular. The illness dated back for about twelve months, when without any cause the patient gradually lost her colour and became weak.

The blood, drawn with some difficulty, was on examination found to be watery and light in colour. Under the microscope the red corpuscles were seen to be much diminished in number, pale in colour, did not form rouleaux, but collected in heaps; many were irregular, some crenated, and others tailed with variations in size and undergoing movements.

Tested with the hæmoglobinometer the hæmoglobin was found to be only 10 per cent. of the normal. The temperature was raised and the pulse was quick and feeble.

Soon after admission thirty drops of a solution of dialysed iron was ordered to be given three times a day, with a diet of milk, beef-tea, and egg. Under this treatment the patient did not improve and seemed to be getting worse. Indeed, about three weeks afterwards a message was sent in the night that the patient was dying, and when she was visited scarcely any pulsations could be detected at the wrist, and the patient looked as though she could not last till the morning. Two ounces of brandy were given in water, after which her condition slightly improved.

On Sept. 5th three drops of arsenical solution were added to the medicine, and after a few days improvement was seen to have commenced, and the medicine was ordered to be given four times a day. In a few weeks the vomiting ceased, the colour began to appear in the lips and gums and the patient looked much improved. There was no diarrhœa and headache was not complained of. The pulse was fuller and less quick, the hæmoglobin was raised to 30 per cent., and the patient was allowed to sit up in bed.

On Oct. 4th (seven weeks after commencing arsenic) the hæmoglobin was 40 per cent. of the normal, the colour had returned to the cheeks, lips, and gums, and the patient said she felt quite well, and was allowed to leave her bed; and although at first there was marked weakness, she soon walked without difficulty, and in three weeks after the last date recorded she was sufficiently well to leave the hospital and perform her ordinary household duties.

Before leaving the hospital the blood was examined, and found to be of a bright and natural colour, the corpuscles were greatly increased in number, and the hæmoglobin was 75 per cent. of the normal. As regards the family history, the father had some enlarged glands in the neck, which were removed by Mr. Sympson, and there is one sister who is anæmic.

Aug. 16th: Morning temperature 102·0°; pulse 120. Evening temperature 104·4°; pulse 140.—17th: Morning temperature 102·0°; pulse 118. Evening temperature 102·4°; pulse 136.—22nd: Morning temperature 100·0°; pulse 114. Evening temperature 98·8°; pulse 110.—27th: Morning

temperature 100·0°; pulse 118. Evening temperature 102·4°; pulse 130.—29th: Morning temperature 105·0°; pulse 140. Evening temperature 105·2°; pulse 144.—30th: Morning temperature 100·0°; pulse 118. Evening temperature 100·2°; pulse 120.—31st: Morning temperature 100·0°. Evening temperature 104·8°; pulse 140.—Sept. 2nd: Morning temperature 100·0°; pulse 120. Evening temperature 103·8°; pulse 138.—4th: Morning temperature 100·0°; pulse 120. Evening temperature, 101·4°; pulse 124.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Long-standing Stone in the Bladder, without Kidney Disease.—The Action and Use of Certain Remedies in Phthisis and Bronchitis.

AT the meeting on Dec. 20th, 1880, F. J. Gant, Esq., President, in the chair,—

Mr. PEARCE GOULD read notes of a case of Long-standing Stone in the Bladder, without Kidney Disease. S. S——, aged seventy-three, was admitted into Westminster Hospital on Aug. 3rd with symptoms of stone in the bladder severely marked. He had to pass urine every ten or fifteen minutes day and night, and had not had a good night's sleep for many years. He was very worn by the constant pain and efforts at micturition. The sound struck a large stone, which was so grasped by the bladder that it was impossible to move the short beak of the sound or open the blades of a lithotrite. Lateral lithotomy was performed next day, Mr. Morrant Baker holding the staff, and five stones removed. The patient at once experienced very great relief, slept soundly and well, was quite free from pain, and for several days went on well; but on Aug. 16th, without any complication arising, he sank and died. At the autopsy the bladder was found contracted to the size of an orange, with greatly hypertrophied walls, the mucous lining showing signs of old chronic inflammation. The ureters were not dilated, and the kidneys were healthy. The stones were about equal in size, facetted, weighing in all two drachms and a half, and were composed of a nucleus of uric acid, with a thick outer zone of phosphates. The points commented on by Mr. Gould were as follows:—1. The impossibility of performing any crushing operation in a bladder so contracted around a stone or stones. In such cases lithotomy must always be the only practicable operation. 2. The justification of lithotomy in a man so worn out. It lay in the entire relief of pain and comfort granted for the remainder of life, even if that be but short, as the man recovered from the shock of the operation, and lived eleven days, dying without complication or intercurrent disease; he may fairly be said to have died *after*, but not *from* the operation. 3. The number of the stones. Five large calculi were removed. 4. The immunity of the kidneys from disease in spite of the hypertrophy of the contracted bladder and long-continued cystitis and presence of a foreign body in the bladder. It was shown that this was probably to be explained by the mouths of the ureters not being obstructed by a band of thickened muscular tissue, as is commonly the case. A probe passed along the ureter slipped at once into the bladder under a fold of mucous membrane. The theories to account for the production of so-called "surgical kidney" were mentioned, and the bearing of the facts of this case upon them pointed out.—The PRESIDENT remarked upon the absence of renal disease rendering the case somewhat unique. Death was, no doubt, caused by exhaustion, and was not due to shock, which, in a patient of so advanced an age, would probably have followed in lithotrity.—Dr. EWART inquired as to the exact cause of death, and as to the condition of other organs, remarking that the immunity from renal disease might possibly be due to the smooth surface of the stones giving rise to but little mechanical irritation.—Mr. ROYES BELL related a somewhat similar case, in which he had performed lithotomy in preference to lithotrity.—Mr. GOULD, in reply, said that the severe sufferings of the patient determined him to operate, and the relief afforded justified the step. The case was quite unsuitable for lithotrity. There were no very definite signs of failure of any one organ, slight emphysema and atheroma of arteries being the only obvious lesions.

A paper communicated by Dr. LAUDER BRUNTON "On the Actions and Use of Certain Remedies employed in Bronchitis and Phthisis," was then read. (See p. 4.)

Dr. GILBART SMITH remarked upon the great value of the paper, and of its practical suggestions. He had often found simple remedies very useful in the arrest of cough—especially the short, hacking cough of phthisical patients. For some years he had been in the habit of prescribing a linctus of glycerine and milk (equal parts) with much success; it was soothing, demulcent, and harmless. He hesitated to give morphia in out-patient practice, knowing the carelessness of the patients as to the quantity taken; and had seen in one case almost fatal results follow from the too frequent repetition of a linctus.—Dr. JOHN BRUNTON could endorse all that the author had said, and gave an instance of the relief of violent cough by the topical application of morphia.

OBSTETRICAL SOCIETY OF LONDON.

Pygopagi Twins.—Eczema of the Nipple in Pregnancy.—Follicular Hypertrophy of the Cervix.—Induction of Abortion.

AT the meeting of this Society on Dec. 1st, 1880, Dr. W. S. PLAYFAIR, the President, exhibited the Conjoint Twins, Rosalie and Josepha Blazet, born in Bohemia in January, 1878. They belonged to the second of the four classes into which he had divided cases of double monstrosity—namely, "Two nearly separate bodies, united back to back by the sacrum and lower part of the spinal column." There is a broad and firm bony junction at the lower part of the lumbar region, the pelvis being obviously completely fused. There are two labia majora, a common urethral and anal aperture, and a double vaginal orifice, the septum separating the two canals being apparent. Sensation is quite distinct, except where the pelves are joined. Delivery was very easy, the mother not having been more than a quarter of an hour in labour. The head and shoulders of one twin were born first. The midwife now used strong traction, and thus delivered the feet of both children, the head and shoulders of the second twin passing last. This was the usual mechanism of delivery in such cases. Delivery is probably easier in this class of monstrosity; and hence, although this class is comparatively rare, a large proportion of the living monsters have been of this type—as, for example, the Hungarian twins, Judith and Helen; and the so-called two-headed nightingale, Millie Christine, exhibited some years ago in this country, and still living.

Dr. THOMAS CHAMBERS exhibited a drawing from a case of Eczema of the Nipple in both Breasts in a woman aged twenty-one, married six months, and five months advanced in her first pregnancy. The disease commenced when she was two months pregnant. After confinement it began to disappear, and no trace remained after six weeks. In two cases of long standing, apart from pregnancy, under his care, the eczema had been cured by treatment directed to the uterus, uterine symptoms having also existed.

Dr. HERMAN showed a specimen of Pedunculated Growth from the Cervix Uteri, removed by the écraseur at the fifth month of pregnancy; no ill result followed the operation, and the patient went to full term. When she came for treatment, she had been suffering from hæmorrhage for three or four months, and for about a week the tumour had been outside the vulva. The tumour measured 1¾ by 1¾ by ¾ in. It consisted of the normal tissues of the cervix, and contained glandular cavities from the size of a marble downwards, lined with cylindrical ciliated epithelium.

Dr. PRIESTLEY read a paper on the Induction of Abortion as a Therapeutic Measure. The author considered that the indications for the induction of abortion, as distinct from the induction of premature labour, had never been laid down with sufficient precision in this country. It was usual to say that each case must be judged on its merits, and this lack of rules might unfortunately lead to serious abuse. Examples had repeatedly come within his knowledge where abortion had been provoked for reasons which seemed to him quite inadequate. Though the medical man was, no doubt,

acting in entire good faith in these cases, it would have been very difficult to sustain his action in a court of law. For instance, in one case abortion was induced at the fourth or fifth month on account of a bad rupture of the perineum at the last confinement. In a succeeding pregnancy a sound was introduced, with a similar object, at the end of a month. This, however, had no effect, and she went to full term, and had an easy and natural labour. In a second instance an attempt was made to induce abortion at the second month, because the patient had aborted not long before, and it was feared that pregnancy had recurred too speedily, while a much desired journey would have to be postponed if miscarriage recurred at the same period as before. Fortunately, the attempt failed, and the patient went to her full term. It was often necessary to remind wives and mothers that even spontaneous abortion is often more damaging to health than natural parturition, more frequently lays the foundation of disease, and, if repeated, abridges the period of youth and comeliness. These risks were necessarily greater if abortion was induced. The reasons which may be adduced as justifying the induction of abortion are the following:—(1) Pelvic deformity so great as to preclude the birth of a viable child. (2) Narrowing of genital canal by tumours, cicatrices, or cancer, so as to prevent the passage of a viable child. Great care was here necessary not to overestimate the amount of obstruction. If a series of cases of Cæsarean section, with fair success, should occur, the reasons for inducing abortion in such instances would be undermined. In cases of cancer there was fair ground for Cæsarean section, since the woman had but a short time to live in any case. (3) In obstinate vomiting of pregnancy, when all other expedients are fruitless, and a fatal result is anticipated, if relief cannot be afforded. (4) In eclampsia abortion should only be induced as a last resort, to save life. (5) In irreducible retroversion or retroflexion of the gravid uterus, but only when life is seriously threatened, not merely because the displacement is irreducible. (6) In severe hæmorrhage. (7) In certain other diseases where the complication of pregnancy is undoubtedly endangering life. The responsibility of inducing abortion should never be undertaken without a consultation of two or more medical men, and M. Tarnier had even suggested that a legal declaration should be made to the public prosecutor in every case. He would lay it down that the induction of abortion is only legitimate *when the life of the mother is so imperilled by the continuance of pregnancy that emptying the uterus presents itself as the only alternative to save the mother.* In insanity, chorea, and the like, the proper treatment was probably to treat the morbid condition, and leave the pregnancy to take care of itself.—The PRESIDENT said that it was somewhat curious that this important subject had not previously been brought under the notice of the Society. In one respect we could congratulate ourselves—namely, that so far as his experience went, the induction of criminal abortion was by no means so prevalent as in other countries.—Drs. Barnes, Hickinbotham, Murray, Graily Hewitt, Roper, Edis, Cleveland, and Hayes took part in the discussion, and Dr. Priestley briefly replied.

CAMBRIDGE MEDICAL SOCIETY.

Thrombosis of Pulmonary Artery.—Ruptured Tendon of Biceps Humeri.—The Colourless Corpuscles in Leucæmia.—Malformations in a Fœtus.

AT the meeting of this Society on Dec. 3rd, 1880, Professor Humphry, M.D., F.R.S., vice-president, in the chair—

Dr. ANNINGSON showed the Lungs and Heart from a case of sudden death with extensive thrombosis of the pulmonary arteries and an ante-mortem clot in the right ventricle. The patient, a woman aged about sixty, the subject of chronic bronchitis, was in the hospital for a slight injury to the ankle; she had raised herself in bed, and fell back in a faint, from which she could not be brought round. The branches of the pulmonary artery in both lungs were occupied by tightly-fitting clots of dark purple colour, mottled with greyish-white, granular on the surface, and with the proximal ends rounded or conical. A thin clot in the right ventricle had also the appearance of having formed ante mortem. Death had been from syncope, brought on by the abrupt and severe strain of raising herself in bed. During the syncope the blood had coagulated in the pulmonary arteries, and had made recovery from the faint impossible; an attempt at recovery would only serve to drive the clots farther into the branches of the artery. Referring to the part which the white corpuscles ordinarily play in coagulation, he thought it possible that the tendency to coagulation during life in the puerperal state, and in pneumonia, erysipelas, &c., was due to the excess of white corpuscles in those conditions.—Dr. HUMPHRY had had unusual opportunities of studying the process of thrombosis. When he first had occasion to observe it (in himself) he came to the conclusion that the clotting was dependent, not on the bloodvessels (veins of the lower extremity), but on something in the blood, although the medical attendant, according to the teaching of those days, called it pyæmia, and gave an unfavourable prognosis. Thrombosis is apt to occur at the end of a large number of maladies, the swelling of the limbs that one often sees on the post-mortem table being nearly always dependent on clotting in the veins. It occurs most commonly at the junction of the profunda and saphena veins with the femoral. The presence of valves at the meeting point of two or more veins helps to bring about the coagulation there; the stream of blood may be hardly strong enough to open the valve thoroughly, and it is not unusual to find a small piece of clot as if sheltering itself under the valve. Inflammation of the walls of the vein might follow the clotting, but was not the cause of it. The large proportion of colourless corpuscles in the blood did not appear to him to be a sufficient explanation of the tendency to thrombosis. The latter often occurred when there was no excess of leucocytes, and, for the cases where the leucocytes were in excess, the theory would rather require that the leucocytes should be more than ordinarily ready to part with that ferment to whose agency the coagulation was attributed. It was a remarkable circumstance, that although the veins may be choke-full of these clots, yet they will clear away entirely and leave the vessels as sound as before, and this may happen repeatedly in the same veins. The clot becomes reduced to a thin thread, and the last trace of the thrombosis is a slight staining of the wall of the vein. In the pulmonary artery, the clots are most commonly found at the point where it breaks up into its branches. He related the case of a lady who, having recovered from an easy confinement three weeks before, was sitting at the tea-table and fell dead without any warning. The pulmonary vessels were plugged with ante-mortem clots, which must have been formed for some little time, although there were no symptoms. He had before him a specimen which he had placed in the museum, the only specimen of the kind that he knew of, showing a dissection of thrombosis of the pulmonary artery which had been recovered from. The clots were reduced to firm cords blended with the walls of the vessels. The patient died of erysipelas, with fresh thrombosis of the popliteal and femoral veins, and with these traces of old thrombosis of the pulmonary artery. The woman whose case had been brought forward by Dr. Anningson had been under his (Dr. Humphry's) care in the hospital for about ten days with a slight injury to the ankle. He found her one morning breathing with difficulty, and he was told that she frequently had such attacks, called asthmatic; on the same day she sat up on the bed-pan, and fell back dead. The clots were mostly in the smaller branches of the pulmonary artery, as if there had been simultaneous clotting in the small vessels. As regards the veins of the extremities, he had observed the thrombosis in one attack to begin at the groin and extend down the thigh, and, on another occasion, to begin about the knee and extend upwards. Patients with that condition were usually advised to avoid movements, but he questioned whether the accident of the loosening of a large piece of the clot was at all more liable to occur when the patient went about as usual.

Dr. HUMPHRY showed a specimen from a female subject in the dissecting-room of Ruptured Long Tendon of the Biceps Humeri. The injury is one that can often be recognised during life (by the weakness of the limb, and the muscle drawing itself up into a lump), but he had not seen a dissected specimen of it before. By far the larger number of cases are due to rheumatism, the tendon having become fixed in the bicipital groove. In this case it had been ruptured where it was most liable to rupture—in the part which passes over the head of the humerus. The preparation shows the lower end drawn down and adherent to the belly of the

muscle, coiled upon it in the form of the letter S; it looks as if it had been ruptured a long time. In the upper fragment no changes whatever have taken place; it lies within the joint, and its frayed-out end has the appearance of being newly broken.

Mr. SHANN exhibited a patient from the hospital, with well-marked Splenic Leucæmia, and gave an account of observations that he had made on the blood. There was an enormous increase in the number of white corpuscles, the ratio of white to red being about one to five or six. The total number of blood corpuscles was much below the normal standard. On admission there were 70 per cent. of the normal number, but a further reduction subsequently occurred. Among the white corpuscles were a large number of extraordinary size, and often filled with highly-refracting large granules. He had taken the opportunity of verifying in this case the statements recently made by Dr. Cavafy as to the loss of amœboid movements in the colourless corpuscles in leucæmia. He had made several observations, the most reliable of which (at a temperature of 95° to 100°) gave 10 per cent. of the colourless corpuscles as amœboid, while many more retained the power to a slight degree. He considered that the observed absence of amœboid movements would help to distinguish true leucæmia from the merely physiological leucocytosis.

Dr. ANNINGSON showed and gave an account of a case of Ectopia Viscerum, and other malformations in a fœtus. The abdominal wall was open in front, and the whole of the small intestine, the liver, and other organs, formed a bulging mass outside the cavity. The chief point of interest was the absence of the greater part of the large intestine; the ascending, the transverse, and the descending colon were as if omitted, and all that represented the large intestine was a piece of gut in the position of the cæcum, but open in front. This was really a uro-genital sinus, or cloaca, the two ureters opening upon its skin-like surface a little farther down.

Reviews and Notices of Books.

Clinical Lectures, and Cases with Commentaries. By HENRY THOMPSON, M.D., M.A. Cantab., F.R.C.P. Lond., Consulting Physician to the Middlesex Hospital. London: J. and A. Churchill. 1880.

IT is seldom—very seldom—that medical books are produced by the veterans of the profession for the first time embodying facts from their store of experience in pages to be transmitted to their successors. Less frequent still is it to meet with such contributions full of the zeal and freshness which might be expected at an earlier period of life, when experience has yet to come. Nor is this to be wondered at, for after many years spent in the service of the sick, it may well happen that the energy requisite for such a work should be lacking, whilst in view of the constant additions to pathological knowledge, an author might properly pause before venturing to stereotype his "views." These might, it is to be feared, meet with but a scanty recognition. The tide of seekers after some "new thing" flows past his standpoint, and he will be left alone, unheeded, his words of wisdom and fruits of long experience being but impatiently listened to, if he gain a hearing at all. Far otherwise, however, is it with the volume before us, which we venture to think will be widely read, and thoroughly appreciated, even in these days of keen thirst after novelty. It may be said to comprise the chief results of the author's experience during the last eight or nine years of his long term of office as a hospital physician. For this reason alone the book should be valued; but it has other merits. The chief of these are the originality, terseness, and vigour that mark the lectures; which, added to the polished and clear style in which they are composed, must have made them very attractive to the hearers, whilst they cannot fail to charm the reader. They are models of careful clinical analysis; point after point being discussed with precision and a rare freedom from dogmatism. Compared with the lectures of Trousseau or of Graves, they certainly appear brief, but they are, in their way, quite as effective and characteristic as the widely known works of these masters in clinical literature. In a word, they are finished *studies* of cases occurring in hospital practice.

This is high praise. To those who are unacquainted with Dr. Thompson or his work it may sound exaggerated, but it is not more than is deserved. Many of the lectures are reprinted from the journals or Transactions in which they first appeared, but some have never before been published. To enumerate all the subjects which come under discussion would not be possible within the limits of a brief notice like this. It may be imagined that they are of great variety. "Cerebral" rheumatism occupies a prominent place, and the prodromal relation borne by nerve-symptoms (of one kind or another) to the frequently-occurring hyperpyrexia in these cases is dwelt on and emphatically urged as of prime importance. Dr. Thompson does well to enforce this lesson strongly, for upon it depends sometimes a question of life or death. The occurrence of "nerve-symptoms" in the course of acute rheumatism should give the signal for a careful and minute record of the thermometric curve, lest a sudden and rapid rise in temperature place the patient in a condition of peril from which even the most energetic antipyretic measures cannot restore him. The cases recorded by Dr. Thompson fully justify his insistance upon this line of action.

Another subject, discussed in more than one lecture, is heart disease, and particularly pericarditis, great stress being laid by the author upon the tripartite cantering rhythm of the cardiac sounds, which invariably precedes or accompanies the friction sound; and an interpretation of this sign is given which differs from that of Johnson and Hyde Salter. Pneumothorax, intestinal obstruction, various forms of abdominal cancer, abscess of the brain in relation to ear disease and pyæmia, male hysteria, thrombosis of the vena cava, form the basis of other lectures and commentaries, the text of each in turn being a case, of which in the majority of instances the clinical observation has been supplemented by the post-mortem record. The author has done wisely in thus selecting completed cases for his dissertations, for clinical work is only half done when confined to the limits of the ward. There is room for this book and many like it. In this instance the interest and importance of the subjects are heightened by the scholarly manner in which they are treated by their esteemed author, who in his preface characteristically says, "Although I have ventured to lay this book before the profession at large, my main purpose is to leave it as a legacy to the Middlesex Hospital—*in memoriam*." We trust that some day he may think fit to add further to our obligations, by the issue of more lectures of this stamp.

The Cæsarean Section, &c. By THOMAS RADFORD, M.D. Second Edition. London: J. and A. Churchill. 1880.

THE first edition of this work was published fifteen years ago, and three years subsequently a supplement. In the present edition considerable additions have been made, in which the statistics of the Cæsarean section and craniotomy, and other subjects, are discussed. Brief notes are also given of the modifications of the Cæsarean section proposed by Blundell and Porro, and of the operation—gastro-elytrotomy. Dr. Radford has long been known as an able advocate of the Cæsarean section as opposed to craniotomy; not that he would abolish the latter operation entirely, but he would restrict its field in a very great degree. He writes: "I have been asked by an eminent obstetricist if I dispute that craniotomy may not be resorted to 'to save the mother's life.' In answer to this question I beg most emphatically to say 'Yes.' When her life is jeopardised by some temporary existing cause,

and other circumstances, I would conditionally make craniotomy no operation of election." Again: "Two cases, in one of which there is only a limited degree of contraction of the pelvic brim, and in the other an extreme degree of diminution in the aperture, are not analogous. In one—'the first'—craniotomy will only be required to be performed *once*, as, in the event of subsequent pregnancies occurring, *premature labour* may be induced and the *infant thereby saved;* whereas in the other case craniotomy would have to be performed time after time. In such cases my conscience tells me such horrible destruction of life cannot be defended on any ground whatever." Besides the moral argument in favour of the view he adopts, the author brings forward others of considerable weight, such as the loss of maternal and infant life in craniotomy, though statistics with regard to the former are very deficient. Again, he attempts to show, and with great reason, that the high mortality after Cæsarean section is not really the result of the operation, but is in great part due to other causes, some of which may be eliminated. The operation has been often done as a last desperate attempt to save life after craniotomy had been already performed in vain, or after the patient had been in labour for days; when, in fact, there was not the least reason for expecting a favourable issue. It is quite possible that with proper precautions the mortality of the Cæsarean section may be considerably reduced, and that in consequence the operation may be placed in a different position from that which it now occupies. The general opinion and practice of the profession at present are against the views advocated by Dr. Radford; but it is not impossible that with greater care and better methods of operating a more favourable opinion of Cæsarean section may become general.

A Clinical Note-book for Hospital and Private Practice. By F. ROYSTON FAIRBANK, M.D. Fourth Edition. London: John Smith & Co.

WE are strangely poor in convenient forms of clinical note-books. This is a good attempt to supply the lack. It is not quite perfect in form; it has no index, and the pages are not numbered. Besides, it lacks a few notes and tables, physiological and pathological, that such a book should have. But it is one of the best published, and we advise all our readers to begin the year with some such easy means of recording cases.

THE MEDICINE OF THE ANCIENT JEWS.

OUR knowledge of medical theory and practice among the ancient Jews is far behind our information with regard to other nations, and it is very small when we consider the large amount of Hebrew literature which has come down to us. The code of Jewish laws contained in the early books of the Bible presents us only with an elaborate system of preventive medicine. On many points, however, on which these books are silent, we may gain some knowledge from the pages of the Talmud, and M. Israel Rabbinowicz has lately collected and republished all the passages relating to medicine which are to be found in the twenty-one books which make up that venerable work. These collected passages have furnished the subject of an interesting series of articles which have appeared in our Paris contemporary *L'Union Médicale.*

As might be expected, the ideas of the Jewish doctors of the law, the chief practitioners of medicine, were of the crudest character. They possessed, however, some vague knowledge of anatomy, and allusions are made to two dissections of bodies, in which the remarkable fact was ascertained that a woman has four bones more than a man—the former being found to have 252, the latter 248. However mysterious the conclusion may be, its definiteness affords proof that the dissection must have been at least thorough. In a curious story is narrated a discussion regarding the position of the lower extremity of the spinal cord. Many of their notions betray, however, very imperfect observation. For instance, they believed that the urethra presented throughout its length a fine septum which divides it into a spermatic and a urinary canal. They believed that by long retention of urine this septum might be rent, and a fistulous opening between the two canals result—a "spermatico-urinary fistula,"—which would render a man sterile. Hence they drew the useful lesson that there should be no avoidable delay in micturition.

The physiology of the Talmud is grotesque enough in some particulars. "The kidneys give advice, the heart understands, the tongue produces articulate sounds, the mouth completes them, the œsophagus receives and rejects food, the trachea produces the voice, the lungs absorb liquids, the liver is the seat of rage, and the gall-bladder throws bile upon it and calms it, while the spleen is the seat of laughter." Amongst other duties of the learned doctors was the superintendence of the slaughtering of animals. Arguing from their physiological knowledge that the trachea and œsophagus are the structures most essential to life, they ordered that all animals should be slaughtered by the division of these only. A certain Rabbi, having observed that this was not a very speedy mode of death, suggested the division of the bloodvessels of the neck, but his advice was overruled.

Pathological descriptions are so vague that it is difficult to identify the diseases indicated. In one case, for example, it is difficult to know whether blenorrhagia or spermatorrhœa is indicated. Venereal diseases appear to have been very frequent among the Jews, for a whole treatise is devoted to them; but the accounts are so loose that we cannot now say what diseases are indicated. Much discussion is devoted to the subject of the various "swellings," but the conditions are not further described. Etiology is not more definite than symptomatology, for the three causes to which these diseases are ascribed are witchcraft, fornication, and inanition. The familiar tendency in pathology to multiply diseases by making slight variations distinctive is one of great antiquity, and perhaps never attained a higher pitch than among the Jews, for they distinguished (but did not describe) no less than eighty-three different diseases of the gall-bladder.

The practical duties of the professors of physic were in part hygienic, and were curiously mixed. They had to select the parts of slaughtered animals which should be eaten. They had to detect and recognise the signs that an individual had passed puberty, the signs of virginity, of sterility, and of impurity. Surgery seems to have been almost unknown, but in their methods of treating wounds &c., a certain rude ingenuity was displayed. In the case of a urethral fistula, for instance, the first object was to ascertain whether the semen escaped by the orifice. If it did not, the escape of urine apparently was of little moment. But, of all disasters, impotence and sterility seem to have been thought the greatest. If the semen escaped the following operation was to be performed. The part was first to be rubbed with a grain of barley, then with fat, and, lastly, a large ant was to be applied to the opening. It would bite and attach itself there and then; the head of the ant was to be cut off and left in the wound, in the expectation that this would be effectually closed when the head decomposed. In a case of fracture of the skull, an ant not being large enough, the absent fragment of the cranium was replaced by a piece of dry pumpkin. The patient lived all the summer with his cucurbitaceous cranium, but could not support the cold of winter. M. Rabbinowicz believes that the Jews had some knowledge of the use of anæsthetics, since we read of an individual to whom was given a "remedy to cause sleep before the abdomen was opened."

The therapeutics of the Talmud consist almost wholly of hygienic rules, although one sage recommended bleeding every thirty days as a preventive of disease, and he also indicated certain days of the year and week on which venesection was most advantageous. The opinion ascribed to Rabbi Banaah may, perhaps, have been general. He said: "Wine is the best of remedies; it is only where there is no wine that drugs are necessary."

THE LANCET.

LONDON: SATURDAY, JANUARY 1, 1881.

IT is a little startling to find members of the medical profession classed as "Commercial" in the *Post-office Directories*. It requires some moral courage to face the official fact that the "art and mystery" of the physician is publicly considered a "Trade"; but the old dictum—or distich—which designated the "learned professions three; law, physic, and divinity," even though the order adopted by the versifier may be fairly reversed, might have been confidently trusted to preserve us from the social ignominy of being classed as commercial men. There is a "Legal" department in the Post-office Directory, and it would have been a great public convenience, as well as a simple act of justice to the profession, if there had also been a "Medical" department, giving the names and qualifications, and perhaps the principal hospital appointments, of medical men—an improvement which, looking to the omission of names from the "Commercial" and "Trade" sections, could scarcely have added half-a-dozen pages to the bulk of the already large volumes. We commend the suggestion to the commercial instinct of the promoters of the Post-office Directories, in view of their next issue.

Meanwhile it cannot be gainsaid that the medical, like every other profession, *has* a commercial aspect; and if this is to be, somewhat offensively, thrust upon our attention, and upon the notice of the public at the commencement of each new year, it will be only just, and may be prudent, that we should take this phase of our social relations into serious and practical consideration. The time has passed, perhaps for ever, when the professors of physic could claim to practise solely, or even chiefly, for the advantage of the community, and the humane gratification which the relief of suffering always affords. Setting aside the craft of the apothecary, which was from the first a trade, Medicine used to be a calling affected by none save gentlemen and scholars, who "went out," as the phrase was, from their university, "in Medicine" as in Divinity or Law. The doctors of physic who practised as physicians were then something more than graduates in technicology; they were men of general culture. A great change has come over the medical profession in this respect. The progress of technical knowledge has, or is *supposed* to have, led to the neglect of literature and science—in its wide scope—for the specialties that make up what is called a "medical education." Possibly this change has necessitated, certainly it has in some way brought about, the introduction of an order of men and minds into the medical profession which were not in old times attracted to it. A glance down the lists of the working, as distinguished from the more ornamental, bodies that people the world of science, will show that the names of medical men of the present generation are chiefly conspicuous by their absence. The reason is not far to seek. It is not that the physicians and surgeons of to-day are less scientific than those of an older date—we had almost written *age*, so great was the difference. On the contrary, their acquaintance with the technicalities of science is incomparably more precise and practical than that possessed by their predecessors, but they are too much engrossed with the busy—marketable—work of their profession to command the "leisure" which makes learning a pastime and the pursuit of knowledge a pleasure. It is not a pleasure to be hunted from covert to covert with the baying of a pack of examiners at one's heels. The modern system may tend to the development of a devouring greed for intellectual food; but it will be strange if the next generation, in the sequence of heredity, finds that the "culture" so accomplished has actually proved ennobling. In short, there is an ever-present danger of the sort of *education* this system fosters suddenly degenerating into a process of "cramming" instead of culture. The safeguard—though a sorry and ignoble protection at the best—against this evil may be the recognition of that "commercial" aspect of medical work which is now forced upon us. Already it is beginning to be whispered in the nooks and corners of the medical academia that the test of practical—that is, "commercial" or market—value must be applied to the details of the professional curriculum.

Again, in the active part the medical profession plays in the world, it is beginning—and not too soon—to perceive, and in some sort to assert, its commercial character and claims. If, indeed, we are men of commerce, it is nothing more than just that we should claim a fair recompense for the pains we expend in the service of the public. As yet, it is to be feared, this logical consequence of the commercial status attributed to us is not clearly recognised. We are to be classed and treated as commercial men, but we are not, forsooth, to consider our commercial interests. The practitioner of every other craft except the medical may make gain an object, but the medical man must ever adopt his scale of fees to the convenience of those who should be in need of his services! Why, in the name of common sense, should this be expected of *us*? The baker does not bestow any great wealth of benevolent consideration on the need of his customers, although he deals in "the staff of life," without which they would probably die of starvation. Why should the medical man be asked to accept a nominally inadequate requital for his services on the parallel ground that without the assistance he could render the sick may die of disease? The humanitarian aspect of medicine as a calling has been strained to suit the false sentiment of a maudlin age until it has become ridiculous. The money value of the work done gratuitously for society by medical men in connexion with hospitals, dispensaries, and in their private capacity is enormous. No other profession or trade contributes anything even comparable with the service freely given by the medical, looking solely to its money value! And this will continue to be the case so long as we forbear to read the lesson of prudence pointedly inculcated by the place assigned to us in the Post Office Medical Directories.

We are quite prepared to accept the onus of taking the lead in a strong recommendation that the medical profession should signalise the year on which we are entering by a more politic regard for its own interests. Those interests are not incompatible with the good of society, and it is high

time the practitioners of medicine began to think of themselves and the families depending upon them. It is a morbid sentiment that makes us cling to the traditions of the past, now that those traditions have been ruthlessly uprooted. As regards hospital work, the popular delusion that physicians and surgeons are recouped for their labours by the opportunities of gaining experience, should be shown to be a myth. As a matter of fact, the great bulk of the profession has nothing whatever to do with hospitals, and never had, except while *in statu pupillari*. It is also apparent that the public do not set a very high estimate on the value of hospital appointments, seeing that some of the most successful and most widely known practitioners are not connected with public institutions. It has been the fashion for the most enterprising men in the several branches of medical work to seek and to hold hospital appointments; but this does not prove that these men are in any fair degree recompensed for their exertions, and as a matter of experience, we believe, it will be found that the services thus rendered are not even acknowledged. The sacrifice of time, strength, and, in too many instances, of health and life itself, is final. Meanwhile, the great bulk of gratuitous practice, whether in connexion with hospitals and dispensaries or in private, is chiefly noticeable for the pecuniary loss and injury it entails on the general body of the profession. We want a little plain speaking on this subject, and as a word peculiarly in season just now, let us say the profession would not be less truly "humane" or "public-spirited," if it thought a little more of its own interests and those of its most hard-worked and humbler members, and if the exercise of the gracious gift of charity were a little less demonstrative, and began at home.

THE movements of plants have attracted attention from a very early period; and although at one time the absence of the power of locomotion was regarded as one of the characters by which plants could be distinguished from animals, the partial movements of such organs as the leaves and flowers were familiar to all, and probably constituted the basis of the ancient legend of the metamorphosis of animals into plants. In the great majority of instances the movements observed were referred, as in the case of climbing plants, to the act of growth directed in a singular and exceptional manner, or to variations in the hydrostatic conditions present, or merely to the action of heat or light, without any attempt being made to explain them further. There were some instances, however, in which it was seen that they were of a more complex and remarkable character, and that no such explanation was admissible. The movement of the leaves of the sensitive plant, of the singular leguminous plant Desmodium gyrans, of the Dionæa, and others, were too sudden and too obviously produced or affected by stimuli to allow them to be referred to growth, or changes of temperature, or of light; and it became requisite to admit the possession by plants of a certain degree of irritability analogous to that of animal tissues. Various observers (as SACHS, DE VRIES, VINES, and FRANK) have of late years turned their attention to this interesting subject, but none with greater ability and success than Mr. DARWIN. In 1875 he published an essay on the "Habits and Movements of Climbing Plants," in which work he demonstrated that the climbing power was the consequence of the exaggeration of a form of movement common to many plants. He observed that the tip of every climbing plant is constantly performing gyratory movements, to which he applied the term "circumnutation"; for if minute spiculæ of glass or a bristle be attached to the tip, and a tracing taken by allowing the spiculum to rest against a plate of smoked glass, indisputable evidence of the direction and rapidity of the movement can be obtained; the tracing forming, not indeed, as it should do, considering the plant is growing, a circular spiral, but irregular elliptical or oval figures. Now, these movements are partially due to the increased growth of the side which for a time becomes convex, and this is preceded by a state of increased turgescence of the cells on the convex side, and, as Mr. DARWIN believes, by a certain degree of increased extensibility of the cell wall. His more recent researches, which have just been published under the title of "The Power of Movement in Plants,"[1] have led him to the conclusion that circumnutation is not limited to tendrils and the tips of climbing plants alone, but is far more widely distributed through the vegetable kingdom—in fact, that it is a power possessed and actively exerted in every growing part of every plant, though often only on a small scale. Even the stems of seedlings, before they have broken through the ground, as well as their buried radicles, circumnutate as far as the pressure of the surrounding earth permits. In the volume to which we have just referred, Mr. DARWIN gives the tracings, magnified, of the movements performed by the radicle of a seed of Brassica oleracea, and others of the radicles of Githago, Oxalis, Citrus, and many familiar plants. In all instances these tracings form irregular zigzag but more or less elliptical figures, indicating a gyratory or circumnutatory movement of the tip of the radicle. Similar tracings obtained from the epicotyl or plumule of a growing seed gave the same indications of movement. It is remarkable that in all instances examined—and they were many—the plumule of a growing seed breaks through the ground, not by its tip, but in the form of an arch, and thus, as HABERLANDT has shown, the tender apex is saved from abrasion and pressure whilst breaking through the ground. Mr. DARWIN adds that increased force is gained, since the crown of the arch is pushed up with just twice the force that would otherwise be exerted. In the case of the common bean the epicotyl after the apex had freed itself from the seed coats, grew upwards with a force sufficient to lift a thin plate of zinc loaded with twelve ounces.

The irregularity of the ellipses formed by the growing radicles of plants naturally suggests that causes are in operation to modify what would otherwise be uniform and regular, and Mr. DARWIN'S observations have shown this to be the case. The radicles of plants may be said to be primarily affected by gravity which leads them in their growth to penetrate the earth; or, to express the fact shortly, they are geotropic. In the next place they circumnutate, the importance of which is that it enables them to take advantage of crevices and spaces, such as worm burrows, existing in the soil. But in addition, a special kind of sensibility, or rather

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[1] London: John Murray, Albemarle-street.

of irritability, appears to exist in the tip, and yet another in that part of the radicle which is a little above the tip. The tip is sensitive to any steady and continuous pressure on contact, and conducts an impression, which leads the part above the tip to bend away from hard or irritating objects, and enables the tip, in conjunction with the circumnutatory movements, to pursue the lines of least resistance in the soil. The part above the tip, on the other hand, so reacts to direct pressure or irritation as to cause the apex of the radicle to bend, not away from, but, like a tendril, towards the object touched. The radicles of the bean and pea exhibit these peculiarities in a very marked manner. Then, again, the tip is very sensitive to moisture, and possesses a strong tendency to bend towards the source of the moisture; and, lastly, the roots of plants are excited by light, and bend in some instances to, but usually from it. Their course through the soil is thus governed by extraordinarily complex and diverse agencies. The sleep or nyctitropic movements of plants are full of interest. These movements are due partly to turgescence of cells, especially of those forming a pulvinus at the base of the leaf or leaflet, and partly to alternately increased growth on opposite sides, and they beautifully illustrate the theory of evolution; for whilst they are primarily only circumnutatory movements, by undergoing special modification they come to be of particular service to plants, effecting the protection of the upper surfaces of their leaves from radiation into the open sky, and also protecting them from cold by approximation. No exception was found to the rule that leaves which sleep continue to move through the whole twenty-four hours, though always more vigorously on going to sleep and on awaking. Light appears to act especially on the young and growing parts of plants. Mr. DARWIN finds that there are thirty-seven genera, in which the leaves or leaflets rise, often moving at the same time towards the apex or towards the base of the leaf, and thirty-two genera in which they sink in sleep. In his observations on leaves and stems, Mr. DARWIN finds that, on exposure to light, they almost uniformly bend towards it, or are heliotropic, and this he believes to be due to augmented turgescence taking place along one side. It does not seem clear, however, nor does Mr. DARWIN attempt any explanation, why this turgescence should occur on the side away from the light. Other leaves are apheliotropic. Increased turgescence is commonly followed by increased growth, so that a plant which has bent itself towards the light during the day would be fixed in this position were it not for apogeotropism acting during the night. During the day most leaves and cotyledons dispose themselves transversely to the direction of the light—a movement to which he applies "diaheliotropism," and which he again considers to be due to modified "circumnutation." Some seedling plants exhibit extraordinary sensitiveness to light; the cotyledons of Phalaris, for example, become curved towards a distant lamp which emitted so little light as to throw, at the distance at which the plants were, no shadow from a pencil upon a white card. Other seedlings kept in a dark place were laterally illuminated by a small wax taper for only two or three minutes, at intervals of about three-quarters of an hour, and were all found to bow towards the point whence the taper had been held. Most, if not all, of the movements of plants due to the action of light appear to be a modification of circumnutation. Another interesting fact in some seedling plants is that the uppermost part alone is sensitive to light, and transmits an influence to the lower part, causing it to bend. Hence, if the upper part be wholly protected from light, the lower part may be exposed to it for hours, and yet does not become in the least bent, although this would have occurred quickly if the upper part had been excited by light. The discovery of the general fact of the movement of the growing parts of all plants must have been a matter of special self-gratulation to Mr. DARWIN, for it removes one of the difficulties—and by no means a trivial one—in the way of the theory of evolution; for it might, as he observes, well be asked, How did all the diversified movements of plants, for the most different purposes, first arise? As the case stands now, movement has been ascertained to be always in progress, and its amplitude or direction, or both, simply undergo modification for the good of the plant in relation with internal or external stimuli.

THE last three meetings of the Pathological Society have been almost exclusively occupied with a discussion on Rickets, and we may fairly presume that those who have been specially working at this subject have availed themselves of this opportunity of publishing their results and elaborating their views. The debate has been very fully reported in our columns, and we must therefore refer our readers to those reports for the expressed opinions of individuals, while here we draw attention to one or two of the points raised. But first of all we must warn those who read this debate that they will find but little of the nature of fact or recorded observation, while there is abundance of theory and opinion, more or less valuable. Nor is this because the disease is one of which the facts are already well and fully known, or difficult to arrive at. If there is one malady which thrusts itself before the gaze of hospital surgeons and physicians, almost *ad nauseam*, it is rickets, and possibly it is in this abundance of the material at hand that one reason of its apparent unattractiveness lies. It was only in the closing speech that a word was said as to the condition of the blood in rickets, and not one speaker made any reference to the chemistry of rickety urine, if we exclude a remark—a query—of Dr. HILTON FAGGE'S, which was at once replied to by Sir WILLIAM JENNER. Nor was the composition of rickety bones more satisfactorily dealt with; the only observation on this point that could lay any possible claim to the name of fact was to the effect that the proportions of animal and earthy matter were the same in rickety and healthy bones, as shown by rough analyses of two specimens of each. So little interest was evinced in the matter that no one of the subsequent speakers ever alluded to this result, so diametrically opposed to commonly received notions, and the evidence of our unaided senses. The histology of rickets was also but slightly touched upon, and certainly no light was thrown upon its difficulties. Indeed, with few exceptions, the speakers were at greater pains to ask than answer questions, and appeared to labour under the pleasing delusion that there was an omniscient spirit—the Society—to whom they might propound their theories and state their problems, and await patiently, but confidently, for final criticism and answer.

There is certainly agreement among all English autho-

rities that in no just sense can rickets be called a local disease; like other general maladies, its local effects may often be obscure to a careless and superficial observer, the general systemic derangement, while again in other cases this is very marked, without or previous to striking local deformities. In all this there is nothing novel. To many it has appeared strange that the suggestion should ever be made that the parent of rickets is syphilis, and the present discussion contains more than one weighty opinion and observation to refute this suggestion. Sir WILLIAM JENNER evidently thought it hardly worthy of serious discussion, as the facts by which it can be set aside are known to all practitioners. But far otherwise is it with the other question, as to whether syphilis plays any part in the production of rickets. Both diseases are so common, and common among the same class, and in the same conditions of poverty, dirt, and neglect, that to prove a negative must be difficult. Yet we may fairly say that no evidence was brought forward to show that there exists any close relationship between these two affections; while, on the other hand, there are no facts known to lead us to suppose that there is any antagonism between them, and that one protects from the other. Indeed, he would be a bold man who would refuse to think that the debility induced by congenital syphilis may not render the child particularly liable to become rickety if under suitable conditions. A good deal of attention was directed to the subject of cranio-tabes, introduced into the discussion by Drs. BARLOW and LEES. We have already pointed out that, valuable as are their researches and results, they cannot be held to be decisive on the essentially syphilitic nature of this change. The delay in the ossification of the bones, evidenced by the widely open fontanelles, is so characteristic of rickets that, even if the softened condition of the posterior inferior angle of the parietal bones be demonstrated to be due to the influence of inherited syphilis, it will still remain a question whether that influence be not solely exerted in localising, perhaps also specialising, a really rickety affection. The frequent occurrence of Wormian bones just at this spot in the lambdoidal suture suggests the inquiry whether they are in any way connected with the tabetic change.

A very valuable contribution to the etiology of rickets was made by Dr. BAXTER, who has carefully studied the life history of about 120 consecutive cases of rickets. He is of opinion that the disease is the result not only of general bad hygiene, but particularly of a too early administration of starch to children unable to digest and assimilate it. This is a view that has been long held by many others, but Dr. BAXTER has done good service in making an effort to define exactly the part starch feeding plays in causing the disease. His figures will be found in our report. They show that while the place in the family, previous ill-health, heredity, and other circumstances, appeared to have but small, if any, influence, starch feeding was practised in an overwhelming majority of his cases. How the starch acts is a far different question to determine, and, indeed, before we can accept the starch theory at all, there are some apparent difficulties that require to be removed. One of these is the rarity of rickets in country districts in England, where it appears to be limited almost, if not quite, exclusively to towns; another is the rarity of rickets in America, and its absence in certain parts of India. Very probably information on these points may show that they support rather than confute the starch theory, which has, beyond direct evidence, much *à priori* reason in its favour. The absence of starch in milk, which so completely nourishes the infants of all mammalia, not only shows that it is an unnecessary article of diet at that age, but suggests, if no more, that it would be actually harmful. But even if we grant that starch feeding be the most common cause of rickets, need we refer all cases to it? Is it such a special disease that it has for its cause only one improper food element? There are strong reasons for doubting this. The first is that starch feeding is the greatest, most constant, error in the diet of infants; another is the frequency with which acute diseases—sometimes also chronic—are followed by the first appearance of rickets; and a third is the occurrence of rickets at and about puberty. No heed was paid to either of these points at the Pathological Society, but there is evidence that can hardly be controverted or set aside that rickets may commence later than in infancy, and as a sequel to other diseases.

In any inquiry into the true pathology of rickets we cannot afford to lose sight of the fact that the physiological processes of infancy are special in many ways. But of all the points in which they differ from the adult, none are more prominent than the inability to digest starch, and the rapid development of the bony skeleton. In the former lies the chief danger in artificial feeding by the uninformed, while it is on the latter that any cause of malnutrition, any change in the proper composition of the blood, will most tell. It is not at all necessary to search for any other reason why the bones are most and most often affected in rickets. They are the tissue which is most influenced, and is most permanently influenced by irregularity in nutrition—for they, as it were, fix any such change. And here we are brought face to face with the question which we asked some weeks ago, whether rickets is clearly specialised at all? Is there evidence of its being the result of a particular nutritive change, such, for example, as has been shown in connexion with scurvy? Is it not a condition of general debility producible by many different causes, but producing its main effects upon the bones which are the parts most influenced by the nutrition of the infant? Mr. HUTCHINSON threw out a suggestion consonant with this view that there may be a close relation between many different forms of disease of bones. It may well be the case, and it is a point to be carefully kept in view in the investigation of the subject. Meanwhile the debate on rickets has been of use, in showing that there are some points of general agreement, we had almost writen some points settled, and of still more use in showing how little of our knowledge is certain, how much is still mere conjecture, and that, common though the disease be, it has not yet lost the interest attached to all unsolved problems.

THE chief event that has occurred during the year 1880 to interest ophthalmologists is the establishment, under the able presidency of Mr. BOWMAN, of the Ophthalmological Society of Great Britain—an event to which we referred last week. The International Congress of Ophthalmology met at Milan in September, and was

attended by a very large number of ophthalmic surgeons. The president was M. QUAGLINO. M. JAVAL exhibited a new ophthalmometer, LORING an instrument for measuring the curvatures of the cornea, and PFLUEGER one for estimating the sensibility of the retina for homogeneous light. Many papers were read; amongst others, one by M. MEYER on Opto-ciliary Neurotomy, which he recommends in some cases in place of enucleation; others were by SECONDI on Detachment of the Retina, by DOR and LANDOLT on Daltonism. The Ophthalmological Section of the British Medical Association met at Cambridge under the presidentship of Mr. BOWMAN, and was well attended. Interesting papers or discourses were delivered by Professor DONDERS, Dr. BRAILEY, and others; whilst the discussions on Glaucoma and the treatment of Cataract were unusually animated and instructive. In regard to ophthalmological literature, a new journal in the French language, devoted to ophthalmology, the *Archives d'Ophthalmologie*, has appeared, under the editorship of MM. PANAS, LANDOLT, and PONCET. The first number contains several good papers, and it may prove a formidable rival to the well-known *Annales d'Oculistiques*. Amongst the more important treatises that have been published, either at home or abroad, may be mentioned a very complete and well worked-up treatise by KLEIN; a translation by Dr. LITTON FORBES of WECKER's "Ocular Therapeutics"; a work by ROBIN, entitled "Troubles Oculaires"; a treatise on Wounds of the Eye, by M. YVERT; and an instructive series of lectures by Dr. ADOLF ALT of Toronto, on the Normal Anatomy and the Pathology of the Human Eye. Dr. GOWERS has made an important addition to ophthalmic literature in his work on ophthalmoscopy, and v. GRAEFE and SAEMISCH may be congratulated on the completion of their great Handbuch. Lastly, SCHUBERT has published a pamphlet on Syphilitic Affections of the Eye, based upon observations made in the clinic of HERMANN COHN of Breslau, in which the reader will find a good account of the various superficial and deep-seated affections of the eye associated with that disease. REMBOLD has contributed a paper on the condition of the pupil in various diseases of the central nervous system to NAGEL's *Mittheilungen*. In M. SOUS' "Traité d'Optique" the general relations of optics to the eye and to the ophthalmoscope are given in detail. Several new ophthalmoscopes have been proposed. One by Mr. COUPER, of neat construction, in which the mirror can be shifted to any point of a circle of small lenses, and is at the same time made to swing on an axis, so that the reflection of the lamp can be more easily and fully directed into the fundus of the eye of the patient. His case contains two such instruments, one fitted with convex, the other with concave lenses. M. PARENT has constructed another very complete instrument, consisting of a small obliquely-set mirror of four- or five-inch focus, a set of convex and a set of concave lenses arranged concentrically, a set of astigmatic glasses, and a small sector having a stenopæic slit, and an optometer of Scheiner. The only disadvantage of this very serviceable instrument is the thickness of the successive discs through which the observer has to look. Various papers have been written on the anatomy and physiology of the eye. The most recent, and in some points of view most remarkable, statement is that just made by DENISSENKO of St. Petersburg, to the effect that the fovea centralis of the human eye, contrary to the opinion of most histologists, is traversed by many bloodvessels. These are situated in the molecular layer, but are not found at the exact central spot. The number of the nerve-fibres contained in the optic nerve, and of the rods and cones in the outer layer of the retina, has been the subject of laborious examination by SALZER, who finds that the absolute number of nerve-fibres contained in each optic nerve to be in round numbers 438,000. The number of elements contained in the rod and cone layer, which is much more difficult to determine accurately, varied from three to more than three and a half millions. From a comparison of the maxima and minima he arrived at the conclusion that each optic nerve-fibre gives origin to at least three, and probably to seven or eight, retinal elements. The structure of the retina has been made the subject of careful comparative study by DENISSENKO, the subjects of his observations being fish, birds, and mammals. SCHUELLER demonstrates that the retina is nourished by two sets of capillaries. The proper retinal vessels, which are branches of the arteria centralis retinæ, supply the fibrous and ganglionic layers of the retina and the anterior or internal granular layer. The posterior or outer half of the retina is nourished by the choroidal vessels. SAMELSOHN, from a careful microscopical examination of the optic nerves of a patient whose case he had followed in life, shows that the fibres which supply the macula lutea occupy the centre of the optic nerve at the foramen opticum, and as they pass forwards to the bulb become more laterally and externally situated. GUDDEN has described with great minuteness the decussation of the nerve-fibres in the chiasma. AYRES has examined the vision purple, and obtains it readily by immersing the retina in a 10 per cent. solution of common salt, and then a 2·5 per cent. of a solution of bile. Vision purple strongly resists putrefaction. HEISRATH finds that no such canal as that named "Fontana's" exists. The so-called space is really situated in the angle of the anterior chamber between the iris and the cornea, and is filled with connective tissue. Schlemm's canal, on the other hand, is really a canal, and is a part of the plexus ciliaris. Its inner wall is loose, and permits a free passage to the fluid of the aqueous humour. SCZELKOW has instituted certain experiments which have extended over eight years, to determine whether the curvature of the cornea undergoes any alteration with age, and has arrived at a negative conclusion. The presbyopia of advanced years, therefore, is essentially due to the well-known changes in the form of the lens. BEAUREGARD has studied the histology of the vitreous, but his results, whilst negativing those of former observers, establish but little that is new. PESCHEL describes a new entoptical phenomenon which may be observed when a gas flame is looked at through a deep red glass. A rounded heap of bright irregularly confluent points may then be sometimes seen which undergo certain changes, which he attributes to the action of light on the protoplasm, and which suggests that similar changes in the protoplasm accompany every act of vision. The rapidity of accommodation in the human eye has been determined by SCHMIDT-RIMPLER, who finds that with the same convergence of the visual axes the maximum degree of accommodation occupies 1·64 seconds. The value of the myotic agent, eserine, is becoming daily more and more

recognised. The small gelatine discs, now in common use, are extremely valuable in various affections of the eyes. In the first place, in cases of wounds of the cornea near the sclero-corneal junction by contracting the pupil, eserine proves very effective in preventing prolapse, and it is not improbable that it may lead to the reintroduction of the old method of operating for cataract without iridectomy by lessening the danger of prolapse of the iris. In the subacute forms of glaucoma it is often of the greatest service in effecting diminution of the intraocular pressure, with relief of all the symptoms, within the space of a few minutes. It acts essentially on the peripheral branches of the third nerve, but apparently in part as a vaso-motor stimulant, causing contraction of the blood-vessels, and hence a diminution of the fluids in the eye; in part by contracting the pupil, and thus allowing a larger surface of the iris to be applied to the capsule of the lens, practically shutting off the posterior from the anterior chamber; and in part also by opening out the angle of the anterior chamber, and thus permitting a more free drainage of the aqueous humour. It has been warmly recommended by various authors in cases of keratitis and of ulcers of the cornea, especially of the asthenic form, its good effects being referred in part to a stimulant action on the supposed trophic nerves. It has been also found serviceable in cases of idiopathic and of induced mydriasis, and in asthenopia consequent on debility of the muscular apparatus of accommodation. The subject of Colour-blindness is yearly attracting more and more attention. The works of HOLMGREN, COHN, MAGNUS, and MICHEL in Germany, of JOY JEFFRIES in America, of DONDERS and BOUVIN in Holland, of FAVRE and DOR in France, of LUBINSKI in Russia, WOLFE and others in England—all of which have been published during the last year or two,—have demonstrated incontestably the immense responsibility which rests on those who have to control their actions by signals, and the necessity that exists for proper examination and testing of the vision of such officials. There can be little doubt that many of the apparently unaccountable accidents that from time to time occur result from this natural imperfection, and might be avoided in the future if such men were eliminated from a service for which they are physically unfit. Thoughtful papers have been contributed to the pathology of Glaucoma by Dr. BRAILEY and PRIESTLEY SMITH. Great praise is due to Dr. BRAILEY for having shown by careful sections that the condition of the structures forming the angle between the iris and the cornea exercises a potent influence in many cases in the production of glaucoma, for when from any cause the iris and the cornea become adherent and the loose connective tissue normally occupying the angle is obliterated, the drainage of the eye is interfered with, and owing to continued secretion of the aqueous, increased tension is produced, which may easily pass into glaucoma. It is easy to see how the operation of iridectomy and sclerotomy relieve this condition; PRIESTLEY SMITH, admitting the narrowing or closure of the angle of the anterior chamber, attributes glaucoma essentially to enlargement of the lens. HORSTMANN has made a special study of the ophthalmoscopic appearances and functional activity of 3581 myopic patients, and finds that in 1159 cases no visible change was perceptible, while 1683 presented a posterior staphyloma. The acuteness of vision when properly corrected with glasses was normal in the great majority of cases, but in about one-sixth of these cases it was reduced to one-half. Choroiditis, cataract, and detachment of the retina, strabismus, nystagmus, and, rarely, spasm of accommodation were the affections chiefly noticed. NETTLESHIP has described a series of cases of primary keratitis of a peculiar nature affecting the eyes of elderly persons and resulting in the deposit of a crystalline precipitate beneath the epithelium. This form of the deposit is that of a band running horizontally across, but never quite reaching, the periphery of the cornea. It is not unfrequently associated with glaucoma and iritis, and is incurable. Lastly, NEFTEL, KNAPP, AGNEW, and WEBSTER in America, have all directed attention to the possible cure of Cataract by electricity.

THE faith in local self-government must, indeed, be robust if it remain unshaken by the recent and continuing experience of our political and social palladium as it affects vaccination and small-pox in the metropolis. The very genius of muddle seems to have possession of the metropolitan local authorities in relation to these subjects. Presumed to have the function of preventing, actually they contrive to foster the loathsome disease from which the public would escape, but, as the law stands, have no chance of escaping, except through them. Scarcely has one epidemic passed than we are threatened with another, and learn that in the short period between the ending of the one and the beginning of the other, and notwithstanding our recent experiences of the disease, the duties of the vaccination authorities, if not egregiously neglected, have been apathetically performed. The sanitary authorities keep the vaccination authorities well in countenance; the veneer of sanitary avocation laid upon the hospital authority being largely repudiated by them, while at the same time it is made use of as an additional argument for evading the duty which the hospital authority was empowered to aid them in doing. So that during the period when we should have been most active and energetic in carrying out measures for obviating epidemics of small-pox, our efforts were relaxed, and the conditions permitted to grow up under which our local epidemics of the disease arise. It is in vain the Local Government Board has appealed to the several authorities (even so recently as last week to the sanitary authorities) to recognise the common ground of action which underlies this multifariousness of authority. The appeal has fallen largely on deaf ears, for is not the action of the Central Authority a fair copy, and at the same time a justification, of the narrowness of action of the local authorities? With the Local Government Board small-pox in the metropolis, whether on the vaccination side or the public health side, is, above all things, a Poor-law question; and it would be a sin against all the proprieties of departmental administration, apparently, to deal with the question of the recurring prevalence of small-pox within the metropolitan limits,—of its relation to the state of vaccination, of the provision for isolation in hospital, and, incidentally, of the part which such isolation may play in the extension of disease in the neighbourhood of hospitals,—as if mere provincial small-pox, or even typhoid, or diphtheria, or scarlet fever, &c., which have no special relations with Poor-law administration, were in question.

And here we come upon confusion worse confounded. If it

be desired (as it is by many) that local self-government in this matter should be replaced by central government, it should be obvious that the metropolis would merely be stepping from the frying-pan into the fire. Moreover, while we are tolerably familiar with the conditions found in the frying-pan, it is by no means certain that we can forecast (although the experience of the frying-pan and the grumblings therefrom augur the worst) the conditions of the fire. Even local self-government, miserably as it has muddled and still muddles in the metropolis the subjects under consideration, would be a less evil than a central government, which might be possessed of inexhaustible crotchets, and which regards public health matters in the metropolis after a fashion informed by the habits and traditions of Poor-law administration: in other words, a form of administration which, having in sanitary and public health matters failed disastrously in regulating even a workhouse, is held to be equal to the public health requirements of the whole metropolis.

And so it comes to pass—thanks to the apathy of the vaccination authorities, the shortcomings of the sanitary authorities, the anomalous position of the hospital authority, the perverse administrative lop-sidedness of the Local Government Board, and the general want of coördination of these authorities—that the metropolis is permitted to drift regularly into these epidemic extensions of small-pox. Add to the above considerations the negligence of the public in the intervals of epidemics both of vaccination and revaccination, and we have a picture before us which might daunt the most enthusiastic efforts for the betterment of the metropolitan population in this direction.

How far the state of things here indicated may be amended by improved arrangement of the local government of the metropolis, we do not propose to consider here, although we look to such amendment as a primary measure in getting things into better order. We look also to the merging of the peculiar legislation in public-health matters which governs the metropolis in the general public-health legislation of the kingdom as another important step in this direction—a step which would probably relieve the Local Government Board from the anomalous position in which it certainly stands as Central Health Authority in relation to the metropolis. We have to look to the immediate conditions of the case, and to consider in what manner the proceedings of the vaccination and sanitary authorities may, in existing circumstances, be best excited to a healthier action, and the public brought to a keener sense of their position in the matter. We concede that the Local Government Board (as things are) is, perhaps, doing all that can be reasonably required of it in this direction, with one glaring exception. The exception refers to "animal vaccination," so-called.

It is now four months ago since the President of the Local Government Board promised, in the House of Commons, that his department should make arrangements for the cultivation and issue, subject to certain restrictions, of animal lymph. There is good ground for the belief that such issue would overcome much friction in carrying out the vaccination law, and conduce to the greater freedom of revaccination, a consideration of hardly less importance than primary vaccination in the present state of vaccination among the population, and in view of an impending epidemic of small-pox. What has become of Mr. DODSON'S promise? Certainly it has not, to the present time, been performed, and for all that is known to the contrary outside Whitehall it might have been forgotten. It was contemplated, in the first instance, we believe, to start the English supply and cultivation of animal lymph from an original case of cow-pox, a determination much to be approved at the time the promise was given, but which necessarily postponed the carrying out of the promise indefinitely. Original cases of cow-pox appear to be of the rarest in England at present, and if any case had been discovered it is unlikely that the knowledge would not have reached the public ear. But the increase of small-pox in London and the threatening of an epidemic materially alter the state of the case, and lead us to ask whether Mr. DODSON can properly any longer delay the performance of his promise to an indefinite future. Surely in the face of an epidemic, and having regard to the importance attached by many to the use of animal lymph, it is time to forego, at least for the moment, the intention of starting from a new source, and to avail ourselves of the sources of lymph already in existence. We trust that Mr. DODSON, when Parliament meets, will be able to make a satisfactory statement on this matter; not only as to the delay which has taken place, but also as to his Department having been fully alive to the importance, in view of a threatened epidemic, of the early fulfilment of his promise to issue animal lymph.

Annotations.

"Ne quid nimis."

THE NAVAL MEDICAL SERVICE.

WE would gladly have had it in our power in our annual summary to congratulate the Naval Service on a more favourable progress of its medical affairs through the past year than that which we presented. It would certainly seem no difficult matter to have equalised its position before now with that of the Army Medical Department. With that view a committee sat through April and May, and although it dragged its slow length along, yet after a time it did send in its report, which has, we understand, with similar tardiness been adopted. It is said that a new Warrant is now actually in print, and that it comes up in most respects to the late Army Warrant, being in some particulars even more liberal, as it gives 11*s.* a day to its students at Netley, while those of the Army have but 8*s.* a day; it gives permission to retire after twenty years' service, and a better scale of retired pay to fleet surgeons of twenty-five years' service, who have attained fifty years of age, when they will be compulsorily retired on 30*s.* a day, the same as is awarded to Brigade-Surgeons of the Army of thirty years' service. It will be at least pleasing to many junior members of the profession to learn this, and further that, according to the latest rumours, these conditions will be made known previous to the ensuing examination in February.

LODGINGS AT THE UNIVERSITIES.

WE have to express our sincere sympathy with Mr. Haynes Walton in the great trouble that has befallen him in the bereavement of son and daughter from diphtheria; the former from the disease contracted in lodgings at Oxford, the latter falling a victim to her devotedness in nursing her brother during his fatal illness. Mr. Walton has stated the facts con-

nected with the origin of his son's illness in a letter published last week; and the Rev. G. S. Ward, delegate for licensing lodgings, has replied to the charges urged in this letter with frankness and courtesy. Mr. Ward's letter, however, makes one thing plain, that the system of supervising the sanitary arrangements of the lodging-houses at Oxford is very far from perfect, and the University authorities have undoubtedly incurred a very grave responsibility in the neglect of adequate sanitary precautions in the present instance. It appears from Mr. Ward's letter that after the lodgings had been put thoroughly in order under the supervision of the sanitary officer of the City of Oxford, three years were allowed to elapse before any further inspection was made, and during that time no complaints were offered by the occupants—that is to say, the inspector of lodging-houses apparently waits till the sanitary arrangements again break down, and complaints are made, before instituting another inspection. Surely it ought to be a recognised duty to see that the sanitary arrangements of each licensed lodging are in thorough repair and working order before the commencement of each term. In saying this we do not wish to bear hardly on Mr. Ward; doubtless the means at his disposal are quite inadequate to insure a periodical sanitary inspection of each licensed lodging in the City of Oxford, and we are ready to admit, judging from his letter, that he has really endeavoured to do his duty in the position in which he has been placed. The whole blame rests with the University authorities who have established such a sham and inefficient system of sanitary inspection, and it is to be hoped that the present catastrophe will not be without salutary effect in inducing them to appoint a staff of efficient and specially trained officers to undertake a systematic supervision of all licensed lodgings. The sanitary officer of the city should be requested to make a thorough inspection of each lodging once a year, whilst an inspector of nuisances ought to visit it just before the commencement of each term to endorse the licence, supposing he found everything in working order. No student should be permitted to take lodgings unless the licence had been so endorsed. During term time the inspector should be directed to pay frequent visits to the lodging-houses, in order to ascertain that no obstruction had occurred in the house-drainage, and that the ventilating-pipes, traps, &c., were all in working order. Some such scheme is imperatively demanded, and it is quite certain that the present perfunctory system can be no longer tolerated in this age of sanitary light and science. These remarks apply with equal, if not greater, force to the same system at the sister university, Cambridge.

"GEORGE ELIOT."

"GEORGE ELIOT" is dead. To her intimate friends she was a prophet; to the public she was one of the most remarkable women of her generation; and looking at her large and varied knowledge, at her great intellectual powers, at the breadth and depth of her sympathies with human life and character, at the strength of her imagination, and the whole scope of her genius, it is perhaps not too much to say that she was one of the most remarkable women of all the generations that have gone before. "George Eliot" is dead; and as there will be on the part of our readers a natural, and, indeed, pardonable curiosity to know something of the illness which ended in her death, we subjoin a brief narrative of the facts as they have come to our knowledge.

On Dec. 18th "George Eliot" was present at an afternoon concert, which she much enjoyed. In the course of it her husband, Mr. John Cross, noticing that the place in which they sat was somewhat draughty, proposed to throw her shawl over her shoulders, but she declined the attention with the remark that it was very hot. On Sunday afternoon she felt a little chilly, but was yet well enough to receive and entertain Mr. Herbert Spencer and the other friends who visited her on that day. On Monday morning she was ill, and Mr. George Welland Mackenzie, summoned to see her, found her in a somewhat feverish condition, with symptoms of laryngeal catarrh. On Tuesday morning the laryngeal trouble had almost disappeared, but she was still a little feverish and complained of pain in the right lumbar and iliac regions, but not so severely as she had often felt it before. On Tuesday evening, although both laryngeal catarrh and lumbar pain were almost gone, the patient was not so well. Her breathing was frequent and she was restless and uneasy. The temperature, however, was not above 100°, and a careful examination revealed no signs of fresh local mischief. On Wednesday morning the patient was still worse. There was considerable prostration, the breathing was hurried, the face was grey and anxious, and there was general but indescribable uneasiness. Again Mr. Mackenzie made a careful examination without discovering any fresh local complication, which he was anticipating from the increasing gravity of the symptoms. At this time Mr. Mackenzie explained to Mr. Cross the perilous condition of the patient, and his fears for the issue of it. It had been arranged beforehand that Dr. Andrew Clark should visit Mrs. Cross on that evening at six o'clock, and when he arrived Mr. Mackenzie communicated to him the state of affairs as they existed in the morning. They then visited the patient together, and found that a somewhat sudden and still more serious change had occurred in the course of the afternoon. The patient lay on her back, with the shoulders raised. The eyes were closed; the face was of an ashen grey colour; the lips were slightly livid; the arms lay extended on the coverlet; the breathing was extremely hurried, but quiet, and on feeling the pulse, which was frequent, small, and irregular, the hand was found to be cold and clammy. Plainly now the heart was at fault, and on placing the stethoscope upon the chest, a loud to-and-fro friction was heard throughout the whole cardiac region. The patient was too ill to be further disturbed. Attempts were made to give food and brandy, but they were in vain. Death was evidently near at hand, and the heart rapidly failing; there was complete unconsciousness, and she ceased to live about ten o'clock.

Although the death of this illustrious woman appears to have been thus so painfully sudden, it was not so in reality; for, so to speak, preparation was being made for it during the last eight years. In 1873, on account of the cessation of a uric-acid deposit, and of attacks of pain in the right side and groin, Dr. Clark inferred the presence of a uric-acid calculus in the kidney. In 1874 there were two or three attacks of renal colic, with hæmaturia. In 1876 Mrs. Cross had an attack of cystitis, and was seen by Sir James Paget and Dr. Andrew Clark together. From that time until near the close of life there had been several attacks of pain, sometimes with and sometimes without hæmaturia. In the course of the year 1880 the urine had steadily fallen in density, and contained sometimes albumen, sometimes pus. In October last, Dr. Andrew Clark saw Mrs. Cross at Witley, in consultation with Mr. Parsons, when she was found to be suffering from symptoms of slight calculous pyelitis.

During the last few years, therefore, "George Eliot's" general health had been visibly failing. She was less capable of sustained work, more easily deranged, and liable to sudden illnesses from small causes. The organism, well enough for the ordinary round of a quiet life, was unequal to any extra demand that might be made upon its powers of resistance and repair, and thus it was that a sudden chill brought it, unhappily, to a speedy end.

INFECTED MILK.

WE have been favoured by Surgeon-Major Jameson with the following particulars relating to the outbreak of typhoid fever at Portsmouth Barracks. Instances of the spread of disease by infected milk are becoming numerous, and the account of an outbreak of enteric fever in the Cambridge Barracks may prove interesting.

From Sept. 30th to Oct. 10th, 1880, seven cases of enteric fever appeared. An officer's wife, two children, and a nurse, living in the officers' quarters, the wife of a colour-sergeant, and two children of a private soldier, living in the married quarters of the regiment, were attacked. The sanitary condition of the barracks is good, and on careful examination by the Royal Engineer Department no defects could be discovered. The fact was elicited that all the people affected received their milk-supply from a certain dairy on the Gosport side of the harbour. A specimen of the suspected milk was analysed, and pronounced a fair sample. It was, however, deemed advisable to discontinue the use of the milk in barracks. No more cases occurred.

On October 14th Major R—— visited the milkman's house, and ascertained that his son had been suffering from some kind of fever for several weeks, and was then recovering. The medical man in attendance said he was not prepared to say it was a genuine case of typhoid fever, but admitted there were typhoid symptoms. The house in which this patient lived was one in a row. He lay in a room upstairs. Everything, such as stools, &c., had necessarily to be carried through a back kitchen, which was used as a sort of dairy; for at the time of his visit Major R—— saw milk standing there. There was no properly-constructed dairy whatever, and no other room was used for the purpose. The house had no watercloset, but a privy at the further end of a small garden, in a very offensive condition. The water from the Gosport Water Company was laid on. The water tap was placed above the opening of a drain, which, leading to the privy, was carried on to the cowshed. The typhoid infection may have been absorbed by milk standing in the same apartment as that through which stools were conveyed, or perhaps temporarily deposited. The act of milking also may be highly dangerous in a person in attendance upon a typhoid patient. In the officer's family all the people attacked were in the habit of taking a glass of milk at night before going to bed. The officer himself and two children took milk in tea very sparingly, and escaped. The symptoms of the disease in range of temperature, eruption, &c., were typical, with this exception, that diarrhœa occurred in one case only. In all the other cases constipation constantly required relief by mild enemata. Whether this constipation was accidental or influenced by milk infection is a subject which further investigation may elucidate.

WHOLE-MEAL.

THE problem of a truly economic supply of fully-nutritious bread is not to be solved by platform oratory, or made the subject of a new development of "woman's mission." It is simply a question of manufacturing ingenuity and trade-enterprise. The only difficulty is to grind the meal. We do not want chopped husks, but a finely pulverised flour, comprising the elements of the grain in their natural proportions. We do not believe that artificial combinations of the supposed elements of a normal "whole-meal" in arbitrary relations can compare with the natural food of man. There should not be any persistent obstacle to the supply of the complete flour required for making economic bread. The clumsy mills in use will not, probably, do the work required of them; but it cannot be impossible to devise a crushing apparatus that shall answer the purpose. In fact, there are many such employed in the trituration of other substances. It would be a regrettable circumstance if this matter, which is simply one of supply and demand, should be taken out of the category of everyday affairs, and placed on a sentimental footing under the hackneyed name of "reform"—a term much too freely employed nowadays, and seemingly the ready instrument of every agitator. The public do not stand in need of any special enlightenment on the subject. It has been over and over again demonstrated that the whole-meal contains elements of nutrition which are not to be found in common flour, and which are necessary to insure that the bread shall be easily digestible, and thoroughly good for food. The chemical and physical facts have been repeatedly stated, and are well recognised. The people will be only too glad to get whole-meal bread, when they can be furnished with an article which does not offend the sight by its needlessly dirty colour, and the stomach by its mechanically irritating constituents.

RAIN AND FOG.

THE relations between fog and rain ought to be better made out than they are if, as most persons seem to suppose, fog is simply vapour laden or charged with particles of soot. Is it a fact that fogs follow rain with anything like the constancy which should obtain if the conditions were as it is the fashion to state them? Mists are common enough, and everybody is familiar with the dense damp cloud, miscalled a fog, which every now and again floats in over the sea and enshrouds the channel in darkness. Vapours of similar constitution are common enough on land; but strangely, if we are to accept the popularised hypothesis of fog-production, they do not arise from, or in any marked degree associate themselves with, the most smoky districts! Nor are fogs shown to increase with the prevalence of coal-fires in any particular locality. "London fogs" have lost their distinctly yellow character since the Thames has been embanked, although the smoke nuisance has been developed superabundantly since the completion of this great metropolitan improvement. Those who are well advanced in the forties cannot fail to remember the genuine old-fashioned fog, which was considered to be one of the peculiar sights of London. When the visitor woke in the morning he found the panes of glass in his bedroom window apparently coated on the outside with a dense layer of yellow distemper, something like what is now seen in the developing-room of a photographer's studio. The glass was rendered so opaque that not even the sill outside could be recognised. This was a common phenomenon some forty years ago. Even in the worst fogs of recent date there has been nothing to compare with the genuine "London fog" for colour or substance. How should this change have come to pass if coal-fires were the cause of these visitations? The number of chimneys pouring soot into the atmosphere of London must have multipled nearly 50 per cent., area for area, during the last half century. Many of the known facts about fogs point to a connexion between the surface-drainage and their production. Yet, if that seeming connexion actually existed, there should be some constant sequence of rain and fog. There *is* an obvious and easily-recognised relation between rain and mists, but not between rain and fogs properly so-called. The change of colour which is noticed in the fogs of recent, as compared with previous, times is probably, to some extent, due to the covering up of the yellow London clay by the extension of buildings. This points to the inference that it is with matters derived from the earth itself rather than from the atmosphere, fogs are laden. Before any hasty conclusions are adopted with regard to the mode and source of fog-production, it would be well if a few common-sense inquiries were insti-

tuted by practical geologists. It is vastly easy to charge the evil on the consumption of coal, but, so far as we can see, the ascertained facts do not warrant this line of inference. The question must be more carefully and scientifically investigated before it reaches a practical and safe settlement.

MEDICAL COLLEGES IN THE UNITED STATES.

ONE of the great evils of the medical system of America is the multiplication of medical colleges. Anybody can get up a medical college, with the terrible power of granting medical diplomas. No medical theory is too wild to justify the creation of a special college for its teaching. But unfortunately the evil does not end here. A letter in the *Missouri Republican*, published at St. Louis, divulges another bearing of the host of medical colleges in the cities of the Union. This letter is written by Mr. Charles W. Francis, the Health Commissioner, to Dr. D. V. Dean, superintendent of the City Hospital, and has reference to the privileges of the Medical Colleges as regards the *right of admission to the hospital*. Every Medical College, it seems, complying with the law, has the right of admission to the hospital for purposes of teaching, so that the unfortunate patients, after having been duly studied by a regular teacher and his class, are liable to be put through the same ordeal by the homœopathic teacher, to be again followed by the eclectic teacher, &c. The Health Commissioner points out that this privilege of medical colleges has become a huge nuisance alike to the officers of the hospital and to the patients, and he intends to propose to the city authorities a modification of the laws regulating this matter. We should say the sooner the better for the sake of medical science and of humanity. St. Louis has, we presume, fewer inhabitants than Leeds, and it has the following medical colleges:—The Missouri Medical College, the St. Louis College of Physicians and Surgeons, the St. Louis Medical College, American Medical College, Homœopathic Medical College of Missouri, St. Louis College of Homœopathic Physicians and Surgeons, and the St. Louis Eclectic Medical College. "We have not yet," says Commissioner Francis somewhat pathetically, "settled the matter as to Dr. Field's College being admitted to the privileges of the hospital, but if the college complies with the law, I will, under the city counsellor's opinion, have to let them in." We heartily wish Commissioner Francis quick success with his new regulations.

MR. JOSEPH COWEN ON VACCINATION.

MR. COWEN, the able though somewhat eccentric member for Newcastle, was lately asked by a deputation to support a Bill to be brought in by Mr. Peter Taylor, to abolish the compulsory clauses of the Vaccination Act. Mr. Cowen declined at present to go so far, but agreed to oppose the estimates for successful and efficient vaccination, and to support Mr. Dodson's Bill, if it should be reintroduced. Mr. Cowen added an argument and a statement which, we confess, surprise us from a man withal so sensible. The hon. member said he looked upon the practice of vaccination as unnatural, and that none of his children were vaccinated. So much the worse for his children we should say; and probably they will have to say so one day. But that is a private matter, and they are now beyond the reach of the law. His argument is a matter of public interest—that vaccination is unnatural. Does Mr. Cowen really mean by his legislative measures to take us back to a state of nature? Is this the end of civilisation? When he comes up from Newcastle by the Scotch Express in six hours, does he not do something far removed from the actions of his ancestors in a state of nature? When he puts on his clothes, is he not doing something which people in a state of nature do not bother themselves to do? In a state of nature an unvaccinated community takes small-pox in a proportion of 90 per cent., and of these 40 or 50 per cent. die in a most horrible state, which deters neighbours from humane and neighbourly attentions to them. Are we to be blind worshippers of a state of nature? If so, why the arts? or the sciences? or the Legislature? or any effort at all at improvement? Mr. Cowen is surely too honest and too sensible a man to adhere to such an argument. It is to be regretted that he has used it. He owes it to his own reputation either to justify it or to withdraw it. The most beneficent discovery of medicine deserves a more intelligent and grateful recognition from Mr. Cowen.

THE USE OF ALCOHOL IN HOSPITALS.

THE tendency to be ostentatious as to the use or non-use of alcohol in hospitals is to be discouraged. The therapeutical value of alcohol is a question not to be disposed of, one way or the other, by letters to the newspapers, or by a limited group of vague statistics, but by a very careful study of its use or non-use in individual cases. The most rigid teetotaller may well be satisfied with the growing tendency in physicians to use it strictly and to be satisfied only with distinct proofs of its utility; and the most generous believer in the medicinal virtues of alcohol must know that the public and individual patients are taking a keener interest in this question than they ever did before, and are making very shrewd personal experiments on the subject. Our own opinion concerning it has been freely expressed, and we have not concealed our conviction that good health is most consistent with very little alcohol or with none; that he who uses alcohol freely or frequently, or by itself and apart from food, is surely laying up disease and degeneration for himself, and probably for his descendants. But we may leave the use of alcohol in hospitals to physicians, who are under every inducement to do that which will show the best curative results. It is but very lately that we received from one of the London hospitals, in no way committed to extreme views, a wonderful revelation of the habits of many of the patients as regards the excessive use of alcohol. We may confidently believe that such revelations are studied by none more carefully than by the physicians and surgeons whose duty it is to treat disease with such antecedents.

SOME POINTS IN THE ANATOMY OF THE EAR.

IN a paper which has just appeared in the *Archiv für Anatomie*, by Professor Retzius, he states that as the great work of the anatomy of the ear on which he is engaged will take a long time to complete, on account of the trouble and expense of the engravings which are to accompany it, he desires to publish provisionally some of the new facts which he has discovered. In the first place, he some years ago found in the auditory labyrinth of teleostean fishes two small plates on the floor of the utriculus, near the canalis communicans, on which two branches of the cochlear nerve terminate. He considered this structure to be the first indication of the "pars basilaris cochleæ." Hasse acknowledged its existence in fishes, and thought it to be the rudiment or "pars initialis cochleæ." Further researches satisfied Retzius that it was present in the plagiostome fishes, and still more recent researches have enabled him to trace it through the amphibia, through many reptilia, in which it is less developed than in amphibia, and through the birds, where it is still smaller and more rudimentary than in reptilia, appearing only as a small spot with a few nerve fibres distributed to it, situated on the floor of the ampulla frontalis. No trace of it can be found in the rabbit, cat, or dog amongst mammals. He has, therefore, changed his opinion, and no longer re-

gards it as the rudiment of the cochlea, but has named it the "macula acoustica neglecta," and the branch of nerve supplying it the "ramulus neglectus." How, then, he asks, does it stand with the true pars basilaris cochleæ—the most important part of the organ of hearing? Since this nerve termination does not represent it, it may be stated that in fishes there is no pars basilaris; they only possess the lagena cochleæ. The first traces of the true pars basilaris occur in amphibia.

A second point to which Retzius has directed his attention is the mode of division of the acoustic nerve. He quotes the descriptions given by Henle, Hyrtl, Luschka, Krause, Quain, and Turner. In the works of all these authors the auditory nerve is stated to divide into two chief branches—a ramus vestibularis and a ramus cochlearis. Some authors admit that the vestibular nerve divides into four branches, which supply the sacculus hemiellipticus and the three ampullæ; whilst the cochlear branch divides into two branches, which supply the sacculus hemisphericus and the cochlea. Others consider that the cochlear nerve only supplies the cochlea, and that the vestibular nerve gives off five branches. Neither of these statements is correct. The anterior of the two main divisions of the auditory nerve—that is to say, the vestibular nerve—which, by the twisting of the parts really lies posteriorly to the other, divides into three branches, which supply respectively the recessus utriculi, the ampulla sagittalis, and the ampulla horizontalis. The posterior main branch—i.e., the cochlear nerve—divides into three branches, which supply the ampulla frontalis, the sacculus, and the cochlea.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE pressure on our space last week prevented us noticing the very satisfactory meeting of the constituency of the Hospital Sunday Fund, at the Mansion House, under the presidency of the Lord Mayor. Though the day was very unfavourable the attendance was good, and the audience and the platform alike showed the hold which this movement has on the churches of London. The first resolution was moved by the Bishop of London, and seconded by Professor Marks, and similarly with most of the others. The utmost conciliation and consideration were shown in discussing the most suitable day for the purpose, and Sunday the 19th of June was agreed upon. Apart from the needs of the hospitals, which are very great, this institution is a positive blessing to the community by supplying an object at which men of all creeds can work together.

SUBSTITUTES FOR ALCOHOL.

MR. FRANCIS VACHER of Birkenhead publishes an experience of 243 cases of typhus observed in hospital, in which he thinks he obtained great advantages in treating patients requiring stimulants with such stimulating drugs as ammonia, compound spirit of ether, and camphor, with or without chinchona (using at times the tincture in small doses), as if he had used wine or spirits. In convalescence, moreover, he gave the preference to ripe fruit and malt extract to beer or porter. Mr. Vacher abstains from alcohol, and thinks that it would probably be all the better if the sick and the healthy would alike abstain. The question he deals with is a complicated one; but there are imported into it certain social and moral matters, which must necessarily affect the conclusions of the observer. Of the value of alcoholic stimulants in the treatment of typhus, *if a stimulant is required*, we imagine no question can well be raised. Is a medical man right, when treating a case requiring stimulants, to substitute for an agent of determined value agents which appear hitherto to have been shown to be of less value? In other words, are we justified in putting aside from a view of some possible prospective social gain a form of stimulant of approved value under certain circumstances for stimulants commonly had recourse to under other circumstances? Is the medical man warranted, in a question of life and death, in leaving unused, on grounds having no connexion with the welfare of his patient, one of the most potent items in his armament? We think not. Experiences like those given to the world by Mr. Vacher and his co-thinkers have their value, particularly in teaching that the use of alcoholic liquors in the treatment of disease ought to be as carefully regulated as the administration of drugs.

NETLEY HOSPITAL.

ATTENTION has been called, by a letter in *The Times*, to the neglect of the military authorities in not having the damage repaired which was done by the fire at Netley Hospital, in March last, to the rooms set apart for the treatment of sick and wounded officers returning from foreign service. It appears that of six rooms appropriated to this purpose, only one is now available. On the 15th December Major Godson, of the Madras Staff Corps, arrived at Southampton by the P. and O. steamer, very ill, suffering from abscess of the liver, brought on by service in Afghanistan. On application being made by his brother-in-law—an officer of the Indian Medical Service—to have him admitted as a patient into Netley Hospital, he was informed that this was impossible, as the only quarter available since the fire was occupied. The establishment of sick quarters for a limited number of officers was a well considered and kind measure, adopted in accordance with the recommendation of Lord Herbert's Commission, and it has proved a great boon to many sick and wounded officers who have arrived in England so ill as to be unequal to the fatigue of a land journey to their homes. It is much to be regretted that a delay of nine months should have occurred before any steps have been taken to put these quarters again in habitable condition, and to secure the boon of skilful treatment and careful nursing to officers returning home in the state in which Major Godson is described to have been. We trust that Mr. Childers will exert his power as War Minister, and order the necessary repairs to be done at once upon his own authority, without waiting for that period to which in the Army so many necessary works and repairs are postponed, and which is described in official language as "to be included in the next year's estimates."

THE TENT-HOSPITAL CASE.

WE regret to say that judgment has been given against the plaintiff in the case of Eaton *v.* Barker and others, heard before Mr. Justice Stephens in the Court of Exchequer. The plaintiff, it will be remembered, is a medical man, who undertook the charge of the tent-hospital erected lately at Grantham, to meet an outbreak of scarlet fever. He charged himself with the duty under an agreement made with a committee of the local authorities then concerned, through their medical officer, Dr. Ashby. When the outbreak was over, and his duty at the hospital ended, he presented an account, according to his agreement as to fees, for £97 7*s.* 9*d.* Meanwhile the authorities originally concerned in the agreement had amalgamated and been formed into a Corporation; and when the account came before the newly organised body, the necessity of the case being over, the sum total was objected to. Mr. Eaton declined to accept a less sum, and sued the Corporation. The Corporation then took advantage of a technical objection, to wit, that under section 174 of the Public Health Act agreements involving sums of over £50 must be entered into by the agreeing authority in a particular manner, and

this manner had not been followed in this case. The objection was held by Mr. Justice Stephens to be good, but its bearing upon the case is best expressed in his own words:—

"It appeared clear to him that the Board resisted a moderate demand for payment earned by a man who discharged a public duty at the risk of his health and practice. They founded their defence on a ground of the most technical character, and which had nothing to do with the merits of the case. He did not, however, feel himself at liberty on that account to deprive them of the costs to which in the order of things they were entitled. If the defence was legal, it was not for him—he did not say that in any other circumstances the facts might be considered—but speaking for himself, it was not for him to say that the mere fact that in his opinion the defence ought not to have been set up, ought to lead him to deprive the successful party of their costs. Judgment would therefore be given for the defendants with costs."

The condemnation of the course taken by the Corporation could not well be expressed in stronger terms. It remains to be seen whether the people of Grantham will allow Mr. Eaton to be thus deprived of his legitimate fees, and mulcted also of the costs of the proceedings. If they do, it will be incumbent upon the profession to interfere in his relief. Medical men in future will, if they are wise, refuse, under the pressure of an epidemic and the alarm of a community, to make any terms with a local authority involving money considerations, except through a solicitor.

THE LATE AFGHAN WAR.

THE Army Medical Officers who have taken part in the recent Afghan war have, we understand, expressed a desire to commemorate the services of the Medical Department in the various expeditions in Afghanistan by some permanent memorial. It has been decided that this is to take the shape of a piece of plate for the Officers' Mess, Army Medical Department, Aldershot. Surgeon-Major G. C. Markey has undertaken the duties of honorary secretary and is collecting subscriptions from officers in India. We hail with satisfaction this evidence of *esprit de corps* amongst medical officers, and as the Indian Government have treated the troops employed in Afghanistan with liberality in the way of allowances and batta, subscriptions and donations will not be felt a heavy tax. The Medical Department played no inconsiderable part in the Afghan war; many officers returned with health more or less shattered; many succumbed to exposure, climate, and disease; one and all did their duty fearlessly and conscientiously in the face of innumerable difficulties. It is fitting therefore that there should be a lasting tribute to their services, and the medical officers at Aldershot will justly prize the honour of having the memorial committed to their keeping.

PATHOLOGICAL SOCIETY OF LONDON.

THE annual meeting of the Pathological Society will be held on January 4th. In addition to the regular business of the Society, the officers and Council for the ensuing year will be elected, and the annual report and statement of accounts read. The following is the list of nominations by the Council:—President: Dr. Wilks. Vice-Presidents: Drs. George Buchanan, Thomas Buzzard, Andrew Clark, James E. Pollock; Messrs. Christopher Heath, Jonathan Hutchinson, S. James A. Salter, Septimus William Sibley. Treasurer: Dr. George Johnson. Honorary Secretaries: Dr. Joseph Frank Payne, Mr. Henry Morris. Council: Drs. Thomas Barlow, E. B. Baxter, J. Cavafy, S. Coupland, Sir Joseph Fayrer, Wm. Ord, Douglas Powell, G. H. Savage, F. Taylor, T. Whipham, W. B. Kesteven; Messrs. W. Morrant Baker, J. N. C. Davies-Colley, Warrington Haward, H. Howse, Joseph Lister, R. W. Parker, W. J. Smith, Waren Tay, W. J. Walsham.

THE MEDICO-SANITARY SERVICE OF THE PANAMA CANAL.

DR. LOUIS CAMPÁNYO, who was at the head of the medico-sanitary service of the Suez Canal during its construction, has prepared for M. le Comte de Lesseps a scheme for the organisation of a medico-sanitary service of the Panama Canal. This scheme, which is published in a separate work by Baillière & Son of Paris, will be read with much interest. After a general account of the topography, geology, meteorology, &c., of the isthmus at the point where it is proposed to cut it through, the author describes in detail the organisation of a health-staff, but rather for the medical and surgical requirements of the case than from the strictly *sanitary*, as we should use the phrase here. The projected organisation for the feeding and the sickness of the labourers is discussed at considerable length, and much is said about ambulances and sick attendants. Vaccination is not forgotten; pharmacy and the surgical armament are duly considered; fire-extinction has a place with reference to the ambulances; cemeteries and sepulture are not overlooked; even prostitution and its consequences are regarded. In addition, a veterinary service is considered. But the condition of habitations of the healthy men, and the arrangements for the disposal of liquid and dry refuse about the habitations, have but the briefest consideration. In this respect the project of organisation differs remarkably from that which an English medical-sanitary authority would probably have prepared. Nevertheless, Dr. Campanyo's scheme contains very much that is instructive, and is accompanied by many suggestions that may be turned to good account, irrespective of the gigantic enterprises—one completed, the other now in a fair way to be completed—out of which they have arisen.

A JUST DECISION BY A COUNTY COURT JUDGE.

AN important case (Bell *v.* Parkinson), and one which has excited considerable interest, was concluded in the Bradford Count Court on Dec. 18th, before W. T. S. Daniel, Esq. (judge), and a jury.

Early in 1879 Dr. Bell attended Mrs. Parkinson in confinement, and, being a delicate woman, her recovery was somewhat protracted. In course of time Dr. Bell sent his account of £8 7*s.* 6*d.* for professional services, and when defendant was pressed for payment of the same he brought in a counter-claim of £50 against plaintiff for negligence. It was alleged by nurse Willis (a trained nurse) that a portion of the placenta had been left behind, which she removed. However, in cross-examination, she said she had thrown it away, whereupon the judge observed that an important link was wanting in the evidence. Ultimately, after an admirable summing up by the judge, the jury returned a verdict for Dr. Bell, and condemned the defendant in costs for both actions.

MEDICAL PRETENDERS IN NEW ZEALAND.

THE *Rangitikei Advocate* and the *Manawater Herald* contain reports of the trial of two persons for the false use of medical titles, named respectively Frederick Lyster and John Frederick Rockstraw. Both were found guilty, and both were fined—Lyster £50, and Rockstraw £25. Our contemporaries, in commenting on these verdicts, approve them, but object to the heavy fines imposed, especially on the ground that the Medical Act of the colony had in these parts been allowed to remain a dead letter. This is a point of detail on which we have no wish to differ from our contemporaries; but we can imagine nothing more necessary in a colony like New Zealand than for the authorities to be careful, and even severe, in punishing false pretences. In

old societies there is less difficulty in distinguishing the regular doctor from the pretender, though even in such communities Medical Acts are very essential. But in a colony, if the authorities are careless, any useless impostor, or incapable druggist, may set up as a doctor, and in a critical emergency, by a false title, fatally mistreat a citizen. The offence is a very serious one, and ought to be most severely punished.

THE Marquis of Bute has intimated his intention of presenting a valuable new site for the Cardiff Infirmary, four acres in extent, and estimated to be worth from £10,000 to £12,000, which site his lordship has to purchase from the executors of the late Lord Bute's will. In addition to this noble gift his lordship is a donor of £1000 towards the Building Fund. The architect of the new buildings is Mr. A. P. Bell of Manchester. It is designed, in the first instance, to accommodate 100 patients, with administrative department sufficient to allow of a future extension to 200 beds. The site is admirably selected, and, when completed, the new buildings will add one more to the noble institutions which are springing up in this rapidly-growing town and neighbourhood. The estimated cost is £21,000, towards which nearly £13,000 has already been promised.

H.R.H. PRINCE LEOPOLD honoured the wedding of Mr. Arnold Royle, M.R.C.S., Surgeon-in-Ordinary to His Royal Highness, and late Assistant-Surgeon Royal Artillery, by his presence at the marriage ceremony in St. James's, Piccadilly, on Dec. 20th, 1880. The bride is the second daughter of Thomas Snow, Esq., Barrister-at-Law, Liverpool. Wedding gifts were presented by their Royal Highnesses the Prince and Princess of Wales, Princess Louise, the Duke and Duchess of Connaught, and Prince Leopold, to the happy couple.

DR. GEE, Physician to St. Bartholomew's Hospital, has recently had under his care in the wards a girl, seventeen years of age, with chorea, for which chloral hydrate in frequently-repeated doses was prescribed. During the third week of its administration, a papular eruption of a dusky hue, surrounded by much cutaneous redness, was produced on the forehead, face, chest, and extremities, in arrangement partly crescentic, and partly confluent. The eruption consisted essentially of a combination of lichen and erythema papulatum, and was attended with some increase of temperature.

WE may expect to hear of the Nursing question giving trouble in our Transatlantic dependencies. The authorities of the Toronto hospital are, it is stated, about to establish a scheme for training nurses, their instruction to be undertaken by a lady graduate of one of the schools of England. We hope the experience so dearly bought in the mother country will not be lost on the promoters of the enterprise in the far west.

THE School of Medicine and Surgery of Montreal has caused a protest to be served on the authorities of the Laval University at Quebec, calling upon them to cease their branch in the former city, and threatening legal proceedings if the protest is disregarded.

DR. J. J. LUCE, of Stratford-on-Avon, has, we regret to learn, met with an accident of a serious nature. Whilst out driving on Tuesday last the horse took fright, and the gig coming in violent collision with a building, Dr. Luce was thrown out and sustained severe injuries of the head and various parts of the body.

AT a public meeting held at Dundee last week, Dr. John Boyd Baxter intimated that he intended giving £125,000 for the establishment in Dundee of a college similar to Owens College, Manchester. Later information attributes the bulk of this gift to the generosity of a lady of the same name. An effort is to be made to raise a similar sum by public subscription for the endowment of the College.

MR. CÆSAR HAWKINS will preside at a meeting, to be held in the Board-room of St. George's Hospital on Jan. 11th, having for its object the promotion of a testimonial to Mr. G. D. Pollock, on the occasion of his retirement from the post of senior surgeon to the hospital.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE MEDICAL INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

Diphtheria in the Hospital for Sick Children, Great Ormond-street.—This report appears to have been issued by the Medical Department of the Local Government Board as an illustration of their failures (to use Beau Nash's "gentleman's" phrase). In March of the present year the patients in the Hospital for Sick Children suffered from an unusual outbreak of diphtheria. Diligent search at the moment failed to elicit a sufficient explanation of the outbreak, which was pretty general throughout the hospital, and aid for help in prosecuting further inquiry was asked from the Local Government Board. Mr. W. H. Power, whose acumen in pursuing researches of this task is well known, and who has already distinguished himself by unravelling obscure outbreaks of diphtheria, was instructed to give the required help, and his report of the course he pursued in carrying out the directions of his Board and the wishes of the hospital authorities is now before us. The report is simply exhaustive so far as our present knowledge of the habits and conditions of prevalence of the disease extends; but he has to confess that it not only gives no explanation of the outbreak, but also furnishes no clue which promises an explanation. Failing such explanation or the clue to one, the report is of special value as showing the state of our present knowledge of the conditions under which diphtheria is likely to prevail, and brings out in a clear sharp light that there are still other conditions of the prevalence of the disease of which we have as yet no knowledge, and of which we have to construct a reasonable hypothesis before we can hope to obtain the knowledge. As an incentive to the construction of such hypothesis Mr. Power's report is invaluable, and we commend it to those members of the profession interested in etiological inquiry who have yet to win their spurs.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Lambeth.—Dr. Archer Farr reports for 1879 a birth-rate of 34·6, and a death-rate (strangers included) of 21·6 per 1000 population. The year was happily not characterised by any special occurrence in the history of the prevalence of disease in the district, and the sanitary administration appears to have pursued a tolerably even course. Dr. Farr advocates the adoption of more stringent rules for preventing the spread of scarlet fever from public schools, and he suggests the observation of the following rules:—"1st. That parents shall not only give notice of the child's illness, but shall specify the *nature* of the illness causing it to absent itself from school. 2nd. A form of certificate should be supplied by the School Board for this purpose, to be filled in by the medical attendant, with the object of verifying the parent's statement. 3rd. A second form of medical certificate should also be supplied, producing evidence of the complete disinfection, not only of the bedding and wearing apparel, but of the body of the patient also, and fixing a date from the period of convalescence at which the child could be allowed to return. In the case of scarlet fever, I should recommend

certainly not less than a month after all evidence of peeling had ceased. 4th. That all absentees during the prevalence of scarlet fever, suffering from sore-throat, or a *slight rash*, should not be readmitted to school without a certificate from a medical man showing that these had no connexion with scarlet fever."

Birkenhead.—Dr. Francis Vacher's report for 1879 comes to hand when we might reasonably begin to expect his report for 1880. It is a pity that these reports cannot be published earlier in the year, for, to have to study at the end of one year the events that occurred in the course of the preceding, when those events have been overlapped by later events, is, to say the least, somewhat tantalising. The health history of Birkenhead for 1879 was, fortunately for the place, uneventful, and Dr. Vacher's report contains little more than the bare record of occurrences. The borough, including the Union Hospital and Workhouse, had a birth-rate of 36·69, and death-rate of 19·23 per 1000 living. The infant death-rate compared favourably with the great centres of population, and with the whole country. Birkenhead, as other places, has been studying the methods adopted in Leeds for the destruction and carbonisation of house and town refuse. Dr. Vacher appears to be well satisfied with the results of the processes. But is he accurate when writing of the contents of "compound middens"—i.e., as we understand it, middens receiving *excrement* as well as ashes and dry house-refuse—being subjected to the destructive process?

Port of London.—Dr. Collingridge sends us his first report. It refers to the year ending June 30th, 1880, the first half of this period not having been reported upon in consequence of the illness and death of the late lamented Mr. Harry Leach. Dr. Collingridge, unwilling that a break should occur in the series of health-reports for the port, has, with the assistance of Mr. Johnson Smith, who acted as medical officer for the port from the death of Mr. Harry Leach to the date of election of Dr. Collingridge, contrived to fill up the necessary details for the missing half year, and thus maintained the continuity of the reports. Dr. Collingridge in the part of the report for which he is personally responsible has followed strictly the lines of reporting laid down by Mr. Harry Leach. He shows that not less than 7601 vessels, 3898 lying in the river and 3703 in docks, were inspected in the half-year ending June 30th, 1880, and the work of inspection may be expected to increase, or at least to become more arduous, when the extension of the Victoria Docks, now in progress, to a reach lower down the Thames is completed. Dr. Collingridge gives some curious particulars relating to the sewage pollution of the Thames which will demand his continued attention, and he shows that the Customs questioning of vessels entering the port by no means answers the requirements of the sanitary authority.

SMALL-POX IN THE EAST OF LONDON.

We elsewhere print a letter from a clergyman in the East of London which shows some of the defects of sanitary administration there in its relation to the present increase of small-pox. The following, relating to the defective administration of the vaccination law in one of the eastern districts of the metropolis, is from a letter addressed by Dr. Stevens, of the Local Government Board, to the Bethnal-green Guardians, Dr. Stevens having the general superintendence of vaccination matters at the Board since Dr. E. C. Seaton's death:—"In Bethnal-green, more than any other district, the increased prevalence of this preventable disease [small-pox] has been most marked. I find from the Registrar-General's Weekly Return for the four weeks ended last Saturday, that 56 deaths by small-pox had occurred in that month. Of these 56 deaths, 39 had occurred in the eastern districts, and of these 39 Bethnal-green contributed 22. From the same source of information I also learn that from Bethnal-green parish alone there were sent to the small-pox hospital no less than 27 cases of the disease in the ten days ended 21st ult. The great majority of these cases have been specifically certified as unvaccinated, while in one-fourth of their number a certified practitioner left the question of vaccination in doubt. Moreover, the returns for three of the weeks—for the other week the statistics are incomplete—show that more than half of the whole mortality occurred in persons under twenty years of age, and that of the fifteen unvaccinated persons who died in the week ended 27th November, twelve were of persons aged between one and twenty years. You will find here, in addition to the direct record of small-pox mortality—what might have been predicted—a very grave condition of unprotectedness. These conditions, I think, demand of the guardians of the parish of Bethnal-green exceptional activity, and I think some aid to the vaccination officer, for the purpose of making a complete visitation of infected districts, for the purpose of discovering all unvaccinated persons. I think it very unfortunate that, as I ascertained on the occasion of a visit I made to the parish on the 8th ult., the vaccination officer, instead of devoting all his time and energies to so increasing a spread of the malady he is specially appointed to guard against, was occupied a portion of the day in one of the parochial dispensaries." It appears that this vaccination officer is also a dispenser to the guardians, and, further, that he keeps a shop! It is calculated that his vocations as a dispenser occupy four hours daily (the shop being attended to by his wife). He is stated to be an excellent officer, but it is evident that the guardians simply require him to expend the balance of his time—his spare time, so to speak—in vaccination work. Need we wonder at the imperfection of vaccination in Bethnal-green, or the difficulty experienced in dealing with an advancing epidemic of small-pox? Truly the disease is there cultivated! Dr. Stevens, in the letter referred to, adverted to the need for a better understanding than appears to exist between the officers of the vaccination authority and the officers of the sanitary authority, and since then the Local Government Board has addressed a circular letter to the sanitary authorities urging them to instruct their officers to give all possible assistance to the officers of the vaccination authority in the discovery of small-pox.

THE HOMERTON SMALL-POX HOSPITAL.

Dr. Tripe's observations on extension of small-pox from the Homerton Small-pox Hospital to neighbouring houses were brought before a recent meeting of the Metropolitan Asylums Board. It was suggested that the Board should investigate the question; but a member took exception to this course on the ground that inquiry would or might imply that the Board did its duties inefficiently! Another member thought it was a subject for the Local Government Board if the Hackney vestry thought proper to move in the matter; then the subject *dropped!* Could anything more surely condemn the anomalous position in which the Board stands in a matter of this kind! We learn that the Local Government Board has taken up the subject, whether on the motion of Hackney vestry or not is not known, and that Dr. Bridges, the medical inspector of the Board for the metropolis, has been instructed to investigate it.

SUPERANNUATION.

The Local Government Board, in a circular letter calling attention to the diversity of practice by the different boards of guardians with respect to superannuation, expresses the opinion that the amount to be awarded to an officer who has served with efficiency for ten years or more, and for less than eleven years, should be an annual sum equal to ten-sixtieths of his salary and emoluments at the time of his ceasing to hold office, with an addition of one-sixtieth in respect of each additional year of service, until a maximum of forty-sixtieths, or two-thirds, be reached. In certain special cases a number of years, not exceeding ten, might be added to those of actual service.

Dr. Owen Coleman, the medical officer of health for Surbiton, in a report recently laid before his sanitary authority, writing of the recent cases of diphtheria which have occurred in that suburb due to infected milk, states that the inculpated dairy used water from two sources—one the town's supply, the other from a foul well on the premises. The town's water had been "laid on" because the well-water had been condemned as impure several months ago; but the well does not appear to have been then closed, and we infer that, as the foul water from it was "occasionally used," it was reserved for dairy purposes! The well, it may be added, is now closed. The cases to which we now especially refer appear to have occurred as an incident in a wider scattering of the disease due to more general causes.

The Lower Thames Sewerage Board are about to attempt to induce the Metropolitan Board of Works to give them an outlet for their sewage through the metropolitan main sewers south of the Thames.

At a late meeting of the Bridgwater guardians a letter was read from the Local Government Board with reference to the repeated prosecution of parents for the non-vaccination of children. The central board expressed the opinion that where there had been one prosecution the guardians might withhold directions to the vaccination officer if there should be good reason to suppose that the continuance of the proceedings would not ensure the vaccination of the child, or would prejudice the due observance of the law in the union generally. In this case surely the Vaccination Amendment Bill, which was introduced by Mr. Dodson last year, and withdrawn on account of the remonstrances of the profession, was superfluous.

A committee of the Halsted Guardians Authority have recommended the establishment of three cottage hospitals for the isolation of cases of infectious disease—one for the district containing the four parishes of Earl's Colne, Colne Engaine, White Colne, and Pebmarsh; another for the parishes of Castle Hedingham, Sible Hedingham, and Great Maplestead; a third for the parishes of Great Geldham, Little Geldham, Toppesfild, Tilbury, Stambourne, and Ridgwell. The recommendation has been referred to the Rural Sanitary Authority.

Dr. Wallace, the medical officer of health for Dundee, reports that for the four weeks ending the 18th Nov., and the five weeks ending 8th Dec., the death-rates of the town were respectively 22·8 and 28·6 per 1000 population. Three deaths from typhus took place in the first period, and 11 in the second period.

The Local Government Board has been impressing upon the Hackney Guardians the desirability that vaccination stations for populous urban or metropolitan districts should be of as public and permanent a character as possible, so that the people would become familiarised with them.

The Keighley Guardians have asked, or are about to ask, the Local Government Board for leave to suspend vaccination in the union during the winter months. It would be curious to know on what reasons this request is grounded.

The Metropolitan Asylums Board has refused to take or rent the new Poplar infectious disease hospital at Plaistow, regarding the terms asked by the Poplar District Board as unreasonable.

A complaint has been made to the Local Government Board by two justices of the peace that the fever hospital at Chesham has been prematurely closed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The continuance of unseasonably mild weather, combined with the effect of the Christmas holidays upon registration, caused a further decline in the English urban rate of registered mortality. In twenty of the largest English towns, estimated to contain in the middle of this year a population of nearly one-third of the entire population of England and Wales, 4214 births and 2668 deaths were registered last week. The births were 971, and the deaths 607, below the average weekly numbers during 1879. The deaths showed a further decline of 125 from recent weekly numbers; and the annual death-rate, which had steadily declined from 22·1 to 19·4 in the five preceding weeks, did not exceed 18·6 last week. The lowest death-rates in the twenty towns last week were 15·6 in Brighton, 16·3 in Portsmouth, 16·3 in Sheffield, 16·5 in Wolverhampton, and 16·5 in Birmingham. The rates in the other towns ranged upwards to 21·9 in Sunderland, 21·2 in Liverpool, 25·5 in Norwich, and 26·4 in Nottingham. Both the two last-mentioned towns showed excessive zymotic death-rates. During the first twelve weeks of the past quarter the death-rate in the twenty towns averaged only 21·4 per 1000, against 23·4 in the corresponding periods of the four years 1876-79.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 370 and 375 in the two preceding weeks, declined to 342 last week; they included 101 from scarlet fever, 80 from whooping-cough, 56 from measles, and 39 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2·4 per 1000 in the twenty towns; it ranged from 0·5 and 0·7 in Brighton and Birmingham, to 4·3 in Norwich, 4·5 in Sunderland, and 5·4 in Nottingham. The fatal cases of scarlet fever in the twenty towns, which had been 140 and 129 in the two previous weeks, further declined to 101 last week; the largest proportional fatality occurred in Norwich, Sunderland, and Nottingham. The fatality of whooping-cough showed an increase, and was largest in Sunderland, Leeds, and Nottingham. The highest death-rates from fever, principally enteric, were recorded in Nottingham, Wolverhampton, and Portsmouth. Of the 23 deaths from diphtheria in the twenty towns, no less than 16 were recorded in London. The deaths from small-pox in London, which had been 12 and 33 in the two preceding weeks, declined again to 15 last week; while no fatal case of this disease was returned in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased from 77 to 373 in the eight preceding weeks, further rose to 380 on Saturday last. The number of new cases of small-pox admitted to these hospitals, which had been 132 and 76 in the two previous weeks, further declined to 65 last week. The number of patients in the Highgate Small-pox Hospital were 28 on Saturday last, against 30 and 26 at the end of the two previous weeks.

The deaths referred to diseases of the respiratory organs in London, which had been 295 and 307 in the two preceding weeks, declined again to 290 last week, and were no less than 273 below the corrected average number in the corresponding week of the last ten years; 175 resulted from bronchitis, and 71 from pneumonia. The annual death-rate from lung diseases last week was equal to 5·0 per 1000 in London, and 5·7 in Liverpool.

In the twenty towns last week 75 uncertified causes of death were registered, equal to 2·8 per cent. of the total deaths. The proportion of uncertified deaths was equal to 1·8 per cent. in London, whereas it averaged 3·7 per cent. in the nineteen provincial towns. No uncertified deaths were registered in Brighton, Portsmouth, Plymouth, or Newcastle-upon-Tyne; whereas their proportion was largest in Wolverhampton, Leicester, Bradford, Hull, and Sunderland.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 20·8 per 1000, against 21·7 and 19·9 in the two preceding weeks; this rate exceeded by 2·2 per 1000 the average rate in the twenty large English towns. The rates in the eight Scotch towns last week ranged from 19·1 and 19·5 in Glasgow and Dundee, to 25·8 and 28·7 in Leith and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had steadily declined from 112 to 80 in the four preceding weeks, rose again to 92 last week; they were equal to an annual rate of 3·7 per 1000, against 2·4, the average rate in the twenty English towns. In the eight Scotch towns the zymotic death-rate last week ranged from 2·7 in Edinburgh and Dundee, to 4·1 and 4·2 in Glasgow and Paisley. The fatal cases of scarlet fever, which had declined steadily from 53 to 17, in the six preceding weeks, rose again to 29 last week; they included 15 in Glasgow, 6 in Edinburgh, and 6 in Leith. The 21 deaths referred to diphtheria showed a further increase upon recent weekly numbers; 12 occurred in Glasgow, 3 in Edinburgh, and 2 both in Leith and Paisley. The 19 deaths from whooping-cough were also more numerous than in recent weeks, and included 9 in Glasgow, 4 in Dundee, and 3 in Edinburgh. Only 4 deaths were referred to fever in the eight towns, of which 3 occurred in Glasgow, and one in Aberdeen. The annual death-rate from acute lung diseases (bronchitis, pneumonia, and pleurisy) was equal to 5·0 per 1000 last week in the eight Scotch towns, against 3·6 in London; the highest death-rates from these diseases in the eight Scotch towns occurred last week in Dundee, Leith, and Perth.

HEALTH OF DUBLIN.

The death-rate in Dublin showed an increase again last week. The annual rate of mortality from all causes in the city, which had steadily decreased in the six preceding weeks from 39·6 to 25·9, rose again last week to 27·6. During the twelve weeks ending last Saturday the death-rate in the city averaged no less than 32·4 per 1000, against 20·7 in London, and 22·0 in Edinburgh. The 163 deaths in

Dublin last week showed an increase of 7 upon those returned in the previous week, and included 21, or 13 per cent., which were referred to the seven principal zymotic diseases, or 3 less than the number in the previous week; 8 resulted from fever (including typhus, enteric, and simple), 7 from scarlet fever, 2 from whooping-cough, 2 from diarrhœa, 1 from small-pox, 1 from measles, and not one from diphtheria. The annual death-rate from those zymotic diseases was equal to 3·5 per 1000 in Dublin last week, against 2·5 in London, and 2·7 in Edinburgh. The deaths referred to fever in Dublin, which had been 8 and 7 in the two previous weeks, rose again to 8 last week, and were equal to an annual death-rate more than five times as high as the average rate from the same cause in the twenty large English towns last week. The 7 deaths from scarlet fever in Dublin showed a decline of 4 from the number in the previous week; and the fatal cases of whooping-cough were also less numerous. The deaths both of infants and of elderly persons exceeded the numbers returned in recent weeks.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

NOTIFICATION OF INFECTIOUS DISEASES IN DUBLIN.

The Council of the Irish Medical Association have recently forwarded a circular to the profession in Dublin for the purpose of obtaining their opinion as to the best method of notification in infectious diseases. It is admitted that great benefits to the public may be expected from an efficient system of notification of infectious disease, but it has been urged that the duty should not be carried out by the medical attendant, as it would involve a breach of professional confidence, be irksome, and prejudicial to him in his private practice. There is little doubt, however, that if the measure is intended to be successfully carried out, the duty of notifying that infectious disease exists in any household must not be left to the householder. The Society of Metropolitan Officers of Health (Dublin), at a meeting held on the 8th of last December, passed a resolution to the effect that it was desirable that both the physician and the head of the family should notify. This plan Dr. Cameron approves, as he found that in November, 1880, out of a total number of 875 deaths, registered within the Dublin registration area, the cause of death was uncertified in 163 instances, and in 157 others there was no medical attendant. It is evident, therefore, that the compulsory notification of contagious diseases (measles, for example, which is easily recognised) by the head of the family is necessary, as in many cases there is evidently no medical attendant. Dr. Cameron in a recent report refers to this subject, and remarks that if the notification of cases of infectious disease were a duty devolving on the head of the family, he is quite sure that the middle and upper classes would not neglect it. But he is confident that great unwillingness to give such notice would be manifested by the majority of the denizens of the tenemental dwellings, though it is in the cases of such dwellings that a prompt notice would alone be really useful.

THE DRAINAGE OF THINLY-POPULATED DISTRICTS.

The medical officer of health for Honiton, Dr. Stephenson, has published some thoughtful remarks on the drainage of suburban and thinly-populated districts by means of small pipes and flushing tanks. He thinks that the flush-tank may be applied to the *complete* drainage of the house, and that, combined with a small-pipe system of drainage, such as was used at Memphis, it offers a solution (particularly on the score of expense) of much of the difficulty of dealing with questions of drainage in thinly-populated districts. We shall be glad to learn that his suggestions have been submitted to the test of experience.

A case has just been heard in the Chancery Division of the High Court of Justice (May *v.* Verity) which is important to householders. The defendant agreed to take an assignment of the lease of a house, and after he had possession he discovered not only that the drainage was in a bad state, but that the drains of other houses ran beneath the house he had agreed to take. Thereupon he declined to carry out his agreement, and proceedings were taken against him to compel specific performance. Among other points urged by the defendant against this, the unwholesome state of the building was advanced, and testified to by Professor Corfield and the sanitary inspector for Paddington, Mr. Clifford; but this would probably have gone for nothing in the mind of the court, and had it not been that the lease specified that the neighbouring houses had a use of the drain beneath the house for "water," and did not specify its use for "sewage," which nevertheless was poured into it, the defendant would probably have been compelled to carry out his agreement.

Yellow fever is reported as being prevalent in St. Louis, Senegal. A quarantine of four days has been ordered for vessels arriving in the Gambier from Goree.

THE SERVICES.

THE WAR AT THE CAPE.

The following list comprises the medical officers at present employed in the Cape command:—Deputy Surgeon-General J. Holloway, C.B., Principal Medical Officer; Surgeon-Majors Wm. Skeen, P. W. Stafford, Wm. Elgee, T. Babington, J. N. Stock, H. Comerford, W. A. Jenings, R. C. Parkinson, J. Fraser, J. H. Asher, Wm. Geogheghan, A. L. Brown, C. B. Jennings, and A. H. Stokes; Surgeons G. Ryan, W. E. Saunders, G. D. N. Leake, J. W. O. Martin, E. C. R. Ward, J. Ring, J. Magann, A. J. Landon, J. L. Ritchie, K. Wallis, O. E. P. Lloyd, A. Harding, J. Falvey, and J. F. Dowman. A considerable augmentation to the above staff will be despatched with the reinforcements ordered out to Natal as soon as transport can be provided. The War Office authorities are also sending out large quantities of medical and surgical stores, ambulances, medical comforts, &c., for the use of the hospitals in the Transvaal.

In a telegram from the General Officer commanding at Natal to the Secretary of State for War, dated Pietermaritzburg, Dec. 28th, occurs the following passage:—"Dr. Ward, only unwounded officer, remains with wounded. Ambulances and medical attendance sent out from Pretoria."

Surgeon Wolseley embarked for China on the 29th ult., in medical charge of a draft of 500 men on board the transport *Scotland*.

Brigade-Surgeon Alfred M. Tippetts has been appointed to the charge of the Station Hospital, York, on return from Afghanistan.

Surgeon J. F. Roberts, Bengal Medical Service, has been permitted by the Secretary of State for India to resign his commission.

Correspondence.

"Audi alteram partem."

RETARDED SIGNS IN PNEUMONIA.

To the Editor of THE LANCET.

SIR,—In a valuable paper, read at the Clinical Society by Mr. Tyson of Folkestone, and reported in THE LANCET, Dec. 18th, 1880, it is stated that a late development of the physical signs of pneumonia is an occurrence not generally recognised among the phenomena of that disease. I would venture to assert, on the contrary, that while it may be quite true that the significance of the fact has been little considered, yet that the fact itself has been known from the earliest times, and, indeed, long before the real nature of pneumonia was understood as an affection of limited duration, tending to spontaneous recovery.

For proof of this assertion I might go back more than a hundred years, to the middle of the last century, and Dr. Huxham, who looked upon the local inflammation of "pneumonic fever" as a subordinate part of it. It is more to the point, however, to come to the time when, with the first employment of auscultation, physical signs were most implicitly and entirely trusted both to discover pneumonia and to trace its progress. More than fifty years ago, when physical signs went for everything, Andral admitted, very unwillingly we may be sure, that there were instances in which the local inflammation appeared to be no more

than the consequence of the fever. He reports at length a case in which six days at least intervened between the first onset of fever and the earliest physical signs. "All the organs," he writes, "seemed to be simultaneously the seat of a strong excitement, without there being in any part real inflammation. No organ was really inflamed, but all seemed on the verge of it."

As regards the explanation put forward at this meeting that in such cases the inflammation is really present all the while, but out of the ear's reach, there are, as I think, several reasons against accepting it. To mention but one: how is it that the physical signs of pneumonia which are not really new but, according to the hypothesis, first come within hearing on the fifth or sixth day, should yet present all the signs of a new pneumonia undergoing its transitions and reaching its time of crisis accordingly?

My present object, however, is not to discuss a controverted point, but to maintain that the fact of pneumonic pyrexia preceding its local signs, far from being a new observation, is amongst the oldest and most familiar. The real question is, whether such is not the rule of the disease; so that if we happened to be by at the very time when, with such remarkable suddenness, the first rigor of pneumonia interrupts the course of health, we should be unable in the majority of cases, although perfectly assured from many signs of the nature of the seizure, to detect for some hours the first physical indications of inflamed lung.

Yours obediently,
OCTAVIUS STURGES.

Wimpole-street, Dec. 20th, 1880.

"LISTERIAN" OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—Your suggestion that the Royal Medico-Chirurgical Society should appoint a committee to investigate this subject is a good one, though I greatly fear they could not come to any very definite conclusions, unless they were prepared to watch a series of cases in the practice of the same operators, half of which should be done without the Listerian details, and half with them. In such an investigation the method of recovery alone could give any trustworthy indication of the value of the methods employed. The mere death-rate is of scarcely any value at all, for with one exception the deaths I have had since I gave up the clamp have arisen from causes over which neither the use nor the absence of the Listerian details could have exercised the slightest influence. The exception is that of a patient poisoned by the use of thymol.

I have tried a long and careful experiment, the results of which have been most satisfactory, and they are briefly, that as the quantity of carbolic acid used for the operation is diminished so does the patient recover more easily, with less fever, distension, and sickness.

This experiment has been tried with the ligature exclusively, and I am now on the point of repeating it with the cautery, but I have already revived the high temperatures, distension, and consequent anxiety, which for more than a year I had been quite free from.

I cannot reconcile the statements of my friends, who tell me such marvellous things about their experience of Listerism in general surgery, with my own experience in abdominal surgery, and as my practice is entirely limited to this special field, and as I have no grounds for doubting the statements of my friends, I can only feel that an explanation will be found in the peculiarities of the peritoneum. This, I think, has been fully sustained by Dr. Bantock's paper.

I am, Sir, yours, &c.,
LAWSON TAIT.

OVARIAN DYSMENORRHŒA, WITH RETROFLEXION OF THE UTERUS.

To the Editor of THE LANCET.

SIR,—I am indebted to Dr. Wynn Williams for his criticisms on the case under my care, published in your "Mirror" of Dec. 4th. Will you permit me to say in reply—

1. I regard it as certain that flexion of the uterus, unaccompanied by other morbid changes, produces no symptoms. But, as distinguished gynæcologists have put forward reasons for thinking that bending of the womb may cause congestion of that organ and ovaritis, I judged it proper to endeavour to straighten the uterus in the case reported. It was demonstrated, by the result of treatment, that the symptoms did not depend upon the shape of the uterus, and this, the main point of the case, and the reason of its publication, is not affected by Dr. Williams's criticisms.

2. I did not deplete the uterus, because menstruation was already too frequent and profuse. If intra-uterine stems are only safe when morbid conditions of the uterus have been first removed—in other words, when the uterus is healthy—I fail to see why they are used.

3. The explanation Dr. Wynn Williams gives as to why the patient was not sterile I admit to be a possible one, but the proof is wanting. Dr. Williams will confer a favour upon the profession if he will tell us how many cases of sterility he has treated with his stem, how long each of them had been sterile, and how many of them subsequently became pregnant.

I am, Sir, yours, &c.,
G. ERNEST HERMAN.

West-street, Finsbury-circus, Dec. 27th, 1880.

"A CHEMICAL LUNG."

To the Editor of THE LANCET.

SIR,—In August last you mentioned with approbation my scheme for a "chemical lung" designed to purify the air of the tunnels of the underground railway, and deemed it worthy of a trial. After long delay the directors lately granted me an interview to explain my scheme in detail. The objections urged, and which they considered fatal to carrying out the scheme, were, first, that the traction powers of their engines were already taxed to the utmost, and that therefore another carriage added would stop the train. To this, my reply that on boat-race days, for example, the overcrowding of the carriages did not arrest their progress, elicited no satisfactory answer. Secondly, I was asked by the practical chemist of the board what I meant to do with the carbonic acid evolved from the hundred tons of coal daily consumed; but my reply that I had only to deal with a limited portion of that gas—viz., so much as was contained in the tunnels from King's Cross to Edgware-road—seemed to excite that gentleman's pity for my want of chemical knowledge. The result of the interview was that the directors declined attempting to purify the tunnel atmosphere by the means proposed. Yours truly,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, Dec. 17th, 1880.

PARIS.

(From our own Correspondent.)

ANOTHER patient suffering from locomotor ataxia has been submitted by MM. Debove and Gillette to the operation of nerve-stretching, and with a most satisfactory result. The following account of the case is taken from the *Progrès Médical*:—"On the 16th of December M. Debove, with the assistance of M. Gillette, made another trial upon an ataxic patient, who, encouraged by the relief of his comrade, himself desired the operation. In this case there were incessant darting pains, sometimes paroxysmal, in the upper extremities. The median and radial nerves on the right side were stretched. The operation, very simple in itself, was as follows. An incision, about seven centimetres in length, was made along the course of the bundle of nerves which was thus exposed; a director was then passed under the nerves in question, with its convex side towards them, and being held by its extremities, a sufficient traction was made to raise them five or six centimetres. It may be observed that such a strain can be borne without any fear of rupture. Experiments made upon the dead subject have shown that a force of forty-two kilogrammes is necessary to tear the radial, and this is considerably above that which was exerted on this occasion. A few sutures in the skin and a carbolic-acid dressing completed the operation. Healing took place by first intention. In this case, as in the former one (see THE LANCET, Dec. 18th, 1880), there was a considerable decrease in the inten-

sity of the pains in the right, and a complete cessation of them in the left upper extremity, as well as in the lower limbs. The plantar anæsthesia is less on the left side, motor incoördination is decreased, and it is now possible for the patient to walk without support. Regular sleep has returned and morphia is no longer required, as "the pains are as nothing to what they were before." A definite judgment as to the value of this treatment is not yet possible. Although the immediate result is most surprisingly satisfactory, it is difficult to say what will be the ultimate effect upon the spinal cord, and the merits of the operation can only be weighed by more extended experience. There is no doubt, however, that this experience will soon be forthcoming, for locomotor ataxia is one of the commonest of the medullary affections admitted into the hospitals of Paris, and Dr. Debove's success is sure to lead others to follow in this path.

It seems likely that the Hôpital St. Antoine will shortly undergo considerable improvements. A few years since a sum of £40,000 was left to the town of Paris by a wealthy citizen for the construction and maintenance of a hospital, which, according to the terms of the will, was to bear the founder's name, and to be mainly devoted to the relief of poor and sick women. No steps having been taken to carry out the testator's wishes, the other heirs lately requested the "administration" to give them effect, and in consequence a *projet* has been presented to the competent authorities by the prefect. It is proposed to enlarge the Hôpital St. Antoine, and to construct a new building in its vicinity, which shall be called after its founder, the "Pavillon Moïana," and contain eighty beds.

A scheme for the enlargement of the Ecole Pratique has come before the Municipal Council, and if put into execution Paris will be able to rival even Vienna in this respect. All the buildings which are now situated between the new Hôpital des Cliniques and the Boulvard St. Michel in one direction, and the rues de l'Ecole de Médecine, Monsieur-le-Prince, and Racine in the other direction, would be removed, and the new school rebuilt on this site. It would contain lecture-theatres for the *professeurs libres*, who correspond to the German *privat-docenten*, debating-rooms for different learned societies, and a number of laboratories and museums.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 23rd:—

Daniell, Charles Henry, Derby.
Gleeson, John Gerald, Cromwell-street, Belgravia.
Long, Richard Patrick, Essex House, Bow.
Verdon, Michael John, Craven-street, Charing-cross.
Wood, Edward Archer, Marlborough.
Wordley, Alfred William, Green-street, Suffolk-street.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Frank Allwork, Westminster Hospital; John Fredk. Williams, John Lyndsay Rodwell, and William Edgar Sicard, Charing-cross Hospital; Hy. Nelson Holberton, St. Thomas's Hospital; Walter A. W. Potts, St. Mary's Hospital; Wilfred Murch, St. Bartholomew's Hospital; Francis Hy. Vivian Voss, London Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Court of Examiners held on the 10th ult. and following days the undermentioned were admitted Licentiates of the College:—

Herbert Joseph Bermingham, Francis George Bonynge, Shepland M'Cormick Boyd, Francis Foster Brady, Louis John Patrick Carroll, Arthur Gerard Chance, Francis Philip Colgan, Patrick Arthur Daly, Valentine Plunkett Dillon, Charles James Douglas, Thomas James Dowse, Frederick William Exham, Michael Edward Fitzgerald, Thomas M'Crath Foley, William Gern, Michael Hayes, Patrick Hoey, William Gardiner Jacob, William Wall Jacobs, Sidney Geo. Jennings, Denis Patrick Kenna, John Keenan, Arthur William M'Math, Henry Strickland M'Gill, Francis John Mulock, Daniel Moon, Arthur Hill Murray, Reginald Lawson Morley, John Patrick Nicolls, Daniel Butler Reardon, Wm. Smyth, John Joseph Stack, Henry James Wyatt.

UNIVERSITY OF DUBLIN.—The undermentioned gentleman has obtained the diploma in State Medicine of the University:—

Polden, Robert J., M.B., B.Ch.

A DEATH from trichinosis, in a butcher who was in the habit of eating raw pork, is reported as having occurred at Bellevue Hospital, New York.

INTERNATIONAL EXHIBITION OF HYGIENE.—On Wednesday, Dec. 29th, at a meeting of the Committee of the Parkes Museum of Hygiene, Mr. George Godwin, F.R.S., in the chair, a proposal was made to hold an International Exhibition in 1881. After a long discussion, in which Dr. G. V. Poore, Professor Corfield, Mr. E. C. Robins, Mr. Rogers Field, Dr. Gowers, and Mr. Mark H. Judge took part, the following resolution was unanimously passed:—"That Her Majesty's Commissioners of 1851 having expressed to the Committee of the Parkes Museum of Hygiene their willingness to provide space at South Kensington for an exhibition of Sanitary Appliances, and other industries connected with Medicine, on the occasion of the International Medical Congress in 1881, it is desirable that the Committee should organise such an exhibition, provided that a sufficient guarantee fund be obtained." Those desirous of assisting the Committee in the work they have thus entered upon, are requested to send their names to the treasurer of the Museum, Professor Berkeley Hill.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—The following is a list of the names of gentlemen proposed by the Council as officers of the Association for the year 1881:—President: Mr. T. Edgelow. Vice-Presidents: Messrs. T. A. Baker, Samuel Cartwright, W. A. N. Cattlin, Francis B. Imlach, S. T. A. Salter, F.R.S., and John Smith, M.D., F.R.S. Ed. Treasurer: Mr. S. H. Cartwright. Hon. Sec.: Mr. J. Hamilton Craigie. Council: Messrs. E. Bartlett, J. Fairbank, F. Fox, C. Gaine (Bath), W. A. Hunt (Yeovil), W. D. Napier, W. G. Ranger, and Augustus Winterbottom. The annual meeting for the election of officers &c. will be held on Wednesday, Jan. 25th, at 8 P.M., when an address will be given by Mr. W. A. N. Cattlin, F.R.C.S., "On the Imperfections of the Dentists Act, with suggestions as to the alterations required to protect the interests of Qualified Surgeons."

VACCINATION GRANTS.—The following gentlemen have received the Government grant for efficient vaccination in their respective districts:—Dr. Geo. R. Barnes of Ewell, Surrey (fourth time). Mr. J. R. Clouting, Thetford Union (second time). Dr. Sealy of Weybridge (fourth time). Mr. R. Istance, Risca district (fourth time). Dr. Mayou of Monmouth (fifth time). Also Mr. Frederick Morgan of Wellington, Somerset.

DR. F. OGSTON, sen., of Aberdeen, who has held the office of police surgeon for nearly half a century, has placed his resignation of the post, together with that of medical officer of health, in the hands of the Town Council of Aberdeen, undertaking to do the duties of both offices until his successor shall be appointed.

THE University of Durham Medical Society held a *soirée* in the Wood Memorial Hall on Dec. 21st. The meeting was a most enjoyable one, being enlivened by good music, and furnished with numerous specimens of microscopical research.

DR. THOMAS WOOD, of Cincinnati, has died from blood-poisoning caused by attending with chapped hands to the wounded in the recent railway accident on the Cincinnati, Hamilton, and Dayton line.

A MEMBER of the Newcastle Board of Guardians was last week fined 5*s.* for neglecting to have his child vaccinated. The defendant declined to pay the fine.

MR. W. K. WAIT has contributed £500 to the building fund of University College, Bristol, in addition to £250 previously given by him.

UNIVERSITY COLLEGE HOSPITAL.—Prince Leopold has consented to preside at the annual festival dinner in aid of the funds of this charity on May 20th, at Willis's rooms.

MOST of the Dublin hospitals and charitable institutions provided a special dinner for their inmates on Christmas Day, and gifts were largely distributed.

DR. GRIMSHAW, Registrar-General for Ireland, has been appointed one of the Commissioners for taking the Census in Ireland in 1881.

MR. R. E. GAGE, medical officer of the Workhouse, Paddington, has received a gratuity of £50 in consideration of extra services rendered by him during the past year.

DR. PETER EADE has been elected Sheriff of Norwich for the year 1880-81.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BAILEY, H. B., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Brownlow Lodge (Great Gonerby) of the Independent Order of United Brothers.

BURROWS, W. S., L.D.S., R.C.S., has been appointed Dental Surgeon to the North-West London Hospital.

CEELY, J. H., F.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Workhouse and the Aylesbury District of the Aylesbury Union, vice R. Ceely, deceased.

DAVISON, R. S., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Castleward Rural Sanitary District, Northumberland, vice Marr, whose appointment has expired.

DONOVAN, R. E., M.D., has been appointed Medical Officer to the Galbally Dispensary, Limerick, vice O'Connor, deceased.

GREENSILL, J. N., M.R.C.S.E., has been appointed Honorary Assistant-Surgeon to the Darlington Hospital, vice Lowes, resigned.

HINE, J. E., M.B., has been appointed Junior Resident Medical Officer to the Radcliffe Infirmary, Oxford, vice A. R. Oxley, resigned.

HORSFALL, H., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Masham Urban Sanitary District.

KAYE, J., M.B., C.M., has been appointed House-Surgeon to the Huntingdon County Hospital.

KIDD, P., M.B., has been appointed Casualty Physician to St. Bartholomew's Hospital, vice Harris, resigned.

MACARTNEY, T. L., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the Roman Gravels, and Wotherton Mines.

MASSIAH, B. J., M.D., M.R.C.S.E., has been appointed Physician to the General Hospital and Dispensary for Sick Children, Pendlebury, and Garside-street, Manchester, vice Borchardt, resigned.

MORGAN, J., F.R.C.S.E., L.R.C.P.L., L.S.A.L., has been appointed Medical Officer of Health for the Langport Rural Sanitary District, Somersetshire, vice Tims, resigned.

MURRELL, W., M.D., M.R.C.P., has been appointed Extra Physician to the North-West London Hospital.

NETTLESHIP, E., F.R.C.S.E., has been appointed Ophthalmic Surgeon to the Hospital for Sick Children, Great Ormond-street.

SCHREIBER, Dr. A., of Augsburg, has been appointed one of the Resident Medical Officers to the German Hospital, Dalston, vice Dr. G. Ludwig, M.R.C.P., resigned.

SHEILD, A. M., L.R.C.P., M.R.C.S.E., late House-Physician to St. George's Hospital, has been appointed House-Surgeon to Addenbrooke's Hospital, Cambridge, vice Ground, resigned.

STEDMAN, A., M.R.C.S.E., L.S.A.L., L.M., has been appointed Medical Officer to St. John's Foundation School, Leatherhead.

VACHELL, E. S., M.R.C.S.E., has been appointed Senior Resident Medical Officer to the Radcliffe Infirmary.

YOUNG, Mr. W. C., has been appointed Public Analyst for the Whitechapel District.

Births, Marriages, and Deaths.

BIRTHS.

KENDALL.—On the 28th ult., the wife of Surgeon-General Henry Kendall, M.D., Poor-law Medical Officer, Chatham District, of a son, who survived his birth only a few minutes.

PALEY.—At East London, South Africa, the wife of J. Hewitt Paley, M.R.C.S.E. &c., of a daughter.

ROWORTH.—On the 26th ult., at Grays, Essex, the wife of Alfred T. Roworth, M.R.C.S.E., of a son.

MARRIAGES.

GODFRAY—BERTRAM.—On the 9th ult., at Grouville Parish Church, by the Rev. Isaac W. Tapper, M.A., Alfred Charles Godfray, M.B., L.R.C.P., of La Motte, St. Helier's, to Edith Elsie, daughter of Mr. H. C. Bertram, of Grouville, Jersey.

HUTTON—DAVIES.—On the 28th ult., at Tyndale Chapel, White-ladies-road, Bristol, Mamie Hutton, second daughter of the late William Hutton, of Glasgow, to D. Arthur Davies, M.B., of Swansea.

DEATHS.

FRANKLIN.—On the 26th ult., suddenly, while presiding at a public examination of the Manchester Jews School, Isaac A. Franklin, M.R.C.S.E., of Park Villa, Fallowfield, near Manchester, aged 68.

GOODMAN.—On the 23rd ult., at his residence, Eastbourne House, Gloucester-road, Birkdale, Southport, Charles Rowland Goodman, M.D., late of Manchester, aged 43.

KER.—On the 23rd ult., at Hadley House, Cheltenham, Isabella, wife of C. B. Ker, M.D., aged 47.

PARKINSON.—On the 23rd ult., at Tiptree Rectory, Essex, Alice Frances, wife of Mr. Edmund Wollaston Parkinson, M.R.C.S.E., L.R.C.P.Ed., of Melbourn, Cambs.

TOULMIN.—On the 22nd ult., suddenly, Abraham Toulmin, M.D., of Russell-road, Kensington, W. (for 19 years Surgeon to the Tower Hamlets Dispensary), in his 86th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ASSELIN ET CIE., Paris.

Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris. Tome 16me. 1879. pp. 336-134. With Illustrations.

BAILLIÈRE, TINDALL, & COX, London.

Consumption as a Contagious Disease, with its Treatment according to the New Views. By D. H. Cullimore, M.K.Q.C.P. &c. pp. 124. With Appendix.

BOGUE, DAVID, London.

Conscious Matter, or the Physical and the Psychical universally in Causal Connexion. By W. S. Duncan. pp. 128.

BRINTON, D. G., Philadelphia.

Yellow Fever, its Ship Origin and Prevention. By Dr. R. B. S. Hargis. pp. 76.

CHURCHILL, J. & A., London.

Lectures on the Surgical Diseases of the Urinary Organs. By Reginald Harrison, F.R.C.S. Second Edition, considerably enlarged. pp. 209. With Illustrations.

Atlas of Pathological Anatomy. By Dr. Lancereaux and M. Lackerbauer, Artist. Translated by Dr. W. S. Greenfield. Seventy highly-finished Plates.

Handbook of Midwifery for Midwives. By J. E. Burton, L.R.C.P. Lond. pp. 308. With 9 Woodcuts.

Relapse of Typhoid Fever, especially with reference to the Temperature. By J. Pearson Irvine, M.D., F.R.C.P. pp. 144. With Temperature Charts.

FISCHER, TH., Cassel.

Dr. Paul Börner's Reichs-Medicinal-Kalender für Deutschland auf das Jahr 1881. Theil II.

GRIFFITH & FARRAN, London.

Lectures on Domestic Hygiene and Home Nursing. By Dr. L. A. Weatherley. pp. 84. 1s.

LEWIS, H. K., London.

Questions on Magnetism and Electricity. By F. W. Lavander, F.R.A.S. pp. 94.

Elements of Practical Medicine. By Alfred H. Carter, M.D. Lond. pp. 374.

A German-English Dictionary of Words and Terms Used in Medicine and its Cognate Sciences. By Fancourt Barnes, M.D., M.R.C.P. pp. 300.

LONGMANS, GREEN, & Co., London.

Experimental Chemistry for Junior Students. By J. E. Reynolds, M.D., F.R.S. Part I., Introductory. pp. 144. With Illustrations.

MACMILLAN & Co., London.

Food for the Invalid, the Convalescent, the Dyspeptic, and the Gouty. By J. M. Fothergill, M.D. Edin. pp. 157.

PAUL, KEGAN, & Co.

The Natural Conditions of Existence as they affect Animal Life. By Prof. Karl Semper. pp. 472. With 2 Maps and 106 Woodcuts.

SAMPSON LOW, MARSTON, & Co., London.

Hernia, Strangulated and Reducible. By J. H. Warren, M.D. pp. 280. With Illustrations.

STOCK, ELLIOT.

Abridged Therapeutics founded upon Histology and Cellular Pathology. With an Appendix. By Dr. W. H. Schussler. Translated by M. D. Walker. pp. 91.

The Popular Science Monthly, December. (Appleton, New York.)—The Contemporary Review, December. (Strahan & Co.)—Cassell's Cookery, Part I.—Cassell's Popular Educator, Part I.—Higher Education of Medical Men. By Dr. F. D. Lente. (Birmingham, New York.)—The "Abdominal Method" of Singing and Breathing as a cause of Female Weakness. By Dr. C. E. Wing, Boston.—The History and Therapeutic Value of Arsenic in Skin Diseases. By Malcolm Morris, F.R.C.S.E.—The Influence and Use of the Will in the Treatment of many Spinal Deformities. By Dr. Roth. (Baillière, Tindall, & Cox.)—The Land Question in Ireland. No. II.—Archives of Medicine. (Putnam's Sons, New York.)—Sunday Magazine, January, 1881. —Record of Christian Labour connected with Prison Mission, &c.—Revista especial de Oftalmologia, Sifilografia, Dermatologia y Afecciones Urinarias, No. XI.—An Account of Seventy-six Consecutive Cases of Abdominal Section; Case of Cholecystotomy; Treatment of Pelvic Suppuration by Abdominal Section and Drainage; The Antiseptic Theory Tested by the Statistics of One Hundred Cases of Successful Ovariotomy. By Lawson Tait, F.R.C.S.—The Opium Question. By Deputy Surgeon-General W. J. Moore.—Ward and Lock's Universal Instructor, Part III.—Sick Nursing essentially a Woman's Mission. By Dr. Dyce Duckworth. (Longmans.)—Sunday Magazine, January, 1881.—Fraser's Magazine, January, 1881.—The Victorian Review.—Journal of Mental Science, January, 1881.—The Professional Pocket-book, or Daily and Hourly Engagement Diary for 1881. (Rudall, Carte, & Co., Berners-street.)—The Cosmopolitan Masonic Calendar, Diary, and Pocket-book for 1881. (Kenning, Fleet-street.)—The British Almanac for 1881. (Greenhill, Stationers' Hall.)—Archives of Ophthalmology, Vol. IX., No. IV. (Putnam's Sons, New York.)—Report on the Cholera Epidemic of 1879 in Northern India. By Surgeon-General J. M. Cuningham, M.D., Sanitary Commissioner with the Government of India.—The Leisure Hour, January, 1881. (Tract Society.)—How to Avoid Disease. By Edward Sergeant, L.R.C.P.L.—Adulteration. By J. Clark, Ph.D.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, December 30th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 24	29·17	W.	48	47	..	58	46	..	Raining
,, 25	29·49	W.	34	33	..	41	29	..	Bright
,, 26	29·79	W.	40	35	..	45	30	..	Bright
,, 27	29·39	S.W.	50	48	..	58	39	..	Raining
,, 28	29·61	S.W.	52	51	..	54	41	·40	Overcast
,, 29	29·49	S.W.	51	49	..	52	48	·03	Cloudy
,, 30	29·37	W.	36	36	..	42	31	0·40	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

OPIUM-TAKING IN AMERICA.

DR. EARLE, physician of the Washingtonian Home, Chicago, has published the result of some observations made by him on the subject of opium-taking. During the last five years, he believes, the practice has increased, fostered, probably, by the ease with which the drug seems to be procurable. Thus fifty druggists of whom inquiries were made acknowledged to having 235 customers amongst them. Of these the great majority (169) were females; the age of the larger number of the victims of this pernicious habit was between thirty and forty years, and they were mostly of the middle class. Various reasons are given for taking the drug—e.g., its stimulative and happy effect, previous addiction to drink, unhappy marriage, rheumatism, neuralgia, "female complaints," previous sickness, wounds received during the war, loss of property, and so on. But the great majority confess it was prescribed during some disease in which pain was a prominent symptom. Women generally use morphia, men of the lower class gum opium, a few of both sexes use the tincture, while occasionally one is found taking large doses of paregoric. A widow, aged fifty, buys of one druggist half a gallon every week. A large number of ladies take one-third to one grain of morphia daily. The great bulk of the drug consumed is by the mouth. Some take a dose two or three times a day, while some of the oldest opium-eaters prefer a large dose at intervals of from one to three days.

A Constant Subscriber.—The second question is an arithmetical one, and not calling for any special answer from us. As to the duties of a consulting physician, strictly speaking they consist in seeing only medical cases, and those only in consultation with the ordinary attendant of the patient. But, practically, we consider this condition would be observed by Dr. A. seeing no patient at his own house at less than a fee of one guinea, and, of course, observing the conditions of area stated in the contract.

THE LATE MR. JAMES CASKIE, OF LARGS.

WE regret that the notice of Mr. Caskie's death did not reach us sooner. A mason of fifty years' standing, and long holder of various public medical offices, cannot die even at a ripe old age without deserving the tributes which were freely bestowed on him by his brother masons, but also by the various public bodies, whose complimentary resolutions well testify their regard. One of the most efficient compliments a public body can pay to an old and meritorious servant is to give his appointments to his son, and we are glad to notice that the respect of the Parochial Board of Largs has taken this form.

"HOSPITAL ADMINISTRATION IN INDIA."

To the Editor of THE LANCET.

SIR,—I trust you will allow me, as a friend of Dr. D. B. Smith, who is not at liberty to speak for himself while in the service of Government, to say a few words in reference to an article which appeared in your issue of the 20th November; and, in the first place, I would remark that it appears to me, as to others, that but for the observations which you made on the 21st August, pointing out that in fairness to Dr. Smith his reply to the Government of the Bengal Resolution should be published, it would most probably not yet have been so, and, as it is, the concession has been made in a grudging, ungracious manner, and Dr. Smith's letter has been sent to the newspapers only, but has not been printed in his official gazette in which the Resolution to which it was a reply appeared. You call the letter long and wordy, and consider that it would have been better for Dr. Smith if it had not been published. It was as a matter of necessity long, seeing that it had to answer so many charges, and to indicate so many mistakes regarding himself, which appeared in the report of the committee that inquired into hospital management in Calcutta. With your permission I shall call attention to one or two points which I think will show that Dr. Smith has done himself good by obtaining the publication of his reply. Take the case of the diets of the Medical College Hospital to which you allude. In the year 1870, when food was much cheaper in Calcutta than it is now, a committee, of which Dr. Payne, the present surgeon-general, was a member, recommended that the rates should be raised from 1s. 1½d. to 1s. 6d. for each European, and from 6d. to 9d. for each native diet. This committee of 1870 stated that the rate of 6d. for natives was too low to secure the stimulants and extras required for the numerous cases admitted in the last stages of exhaustion, and that, though the European rate had not been exceeded, it was, in their opinion, not sufficient to procure meat and milk good enough for the sick. They further reported that the average rate for Europeans of 1s. 6d. a day has long been "an average rate of charge in the European Lunatic Asylum, where all are on full diet, but none require the costly stimulants and extras that are largely used in the Medical College Hospital." But Sir A. Eden's Committee, of which Dr. Payne, who is also superintendent of the European Lunatic Asylum, was a member, recommended two years ago that the rates for Europeans should again be reduced to 1s. a day, and 5½d. for each native.

Dr. Smith in his letter further shows that, according to the analysis of Professor C. H. Wood, the milk supplied under the contract rates in the early part of 1879 consisted of milk 56 and water 44 parts. In estimating the sufficiency of the present rates, it is very necessary to take into consideration that the patients to a large extent obtain food for themselves by purchase, or by having it sent in by their friends. A short time ago it was ascertained that on an average thirty patients daily, or upwards of 10,000 a year, thus supplemented the hospital allowance. I am aware that the practice is said to be "contrary to orders," but if there are such orders they are never enforced. From the report of Sir A. Eden's Committee the public were led to infer that patients in the Medical College Hospital were freely regaled on champagne, jellies, fruit, and cigars! such entries having been detected among the articles of extra diet. Dr. Smith, however, has shown that the expenditure on account of champagne from 1871 to 1872 was £36, or £3 5s. a year, while the largest expenditure was incurred by a single surgeon in one of the years, and amounted to £22 7s. 6d. He has also shown that the cost of cigars for the three years 1872, 1873, and 1876, when he was in charge, was 1s. 7¼d., the cigars having been allowed to asthmatic patients who found relief by smoking. The expenditure on account of jellies during the above three years was £22 5s. 6d., and on account of pomegranates for native patients £7 8s. 3d. In conclusion, let me ask your attention to another part of Dr. Smith's reply. The Government of Bengal, in reviewing the reports of the hospitals of Calcutta for the year 1877, mentions Dr. Smith, along with other medical officers, as having the "satisfaction of knowing that their labours to render the hospitals under their charge worthy of the confidence of the public have been eminently successful." Yet, in face of this resolution, a committee subsequently appointed has laboured to create an impression that the management of the Medical College Hospital, as well as others, was anything but "eminently successful."

The Government of Bengal has very recently been forced to admit that an appalling mortality in the gaols of that province for the year 1879, amounting to 94·8 per mille, was chiefly due to insufficient diet. I happen to know something of the statistics of the hospitals of Calcutta published as well as unpublished for the year 1879, and am rather curious to compare results with those of the current year. There has now been time to test the new rates, but so long as so many patients who can manage it are allowed to supplement their hospital food it must be impossible to arrive at a definite conclusion. My own idea is that economy is looked on as more important than the interests of the sick.

Yours faithfully,

JAS. IRVING, M.D.,
Late Surgeon-General to the Bengal Government.

Edinburgh, Dec. 7th, 1880.

*** We publish Dr. Irving's letter solely on the plea advanced in the first paragraph, that Dr. D. B. Smith "is not at liberty to speak for himself while in the service of Government." But we feel bound to say that it does not in the slightest degree modify the opinions expressed in our leader of the 20th November, which were formed after a very careful perusal of all the published documents, including Dr Smith's own letter.—ED. L.

A VETERAN HUNTER.

DR. GRESHAM, of Louisville, is (says an American contemporary) ninety-seven years of age, and has just started for the mountains on his "last hunt." He is the only living fort-born native of Kentucky. When he came into the world his parents were dodging arrows and tomahawks, and his youth was spent with the rifle in his hand. He says he cannot die in peace until he shall once more have eaten venison of his own killing and cooking.

ERYTHEMA.

To the Editor of THE LANCET.

SIR,—The remarkable case which you reported as having been lately brought before the Clinical Society by Dr. T. C. Fox had been for a long time under my care, as was then stated by Dr. Carrington. I also saw the patient's sister, and agree with Dr. Fox that both are suffering from the same affection of the skin; but I cannot think that we gain anything by naming it "persistent gyrate erythema." If by the term erythema we mean any common superficial inflammation of the skin which does not go beyond the stage of papules, it will include the rashes of measles, scarlatina, and syphilis, the early stage of eczema, and the symptomatic eruptions caused by shell fish, and other gastric irritants. If to this anatomical definition we add the characters usually ascribed to "erythemata" of preference for the upper extremities, acute course, and "accidental" origin, the term is still less applicable to the case in question. Peril has lasted nearly a lifetime, it occurs in the members of the same family, and it is characterised not by the branny desquamation which follows an erythemstous inflammation, but by the presence of slowly-formed, persistent, and adherent scales.

I exhibited the patient at the Hunterian Society in 1878 to several experienced dermatologists, but none of us could recognise it as coming fairly under any recognised term. I satisfied myself, as Dr. Fox has done, that the disease is neither parasitic nor syphilitic, and entered it in my notebook as an anomalous form of chronic serpiginous dermatitis.

Is it not better to be content with describing such cases as we meet with them, and recording them when we can collect two or three of the same kind, rather than to add to the already overgrown crop of dermatological nomenclature by inventing a new name for each new comer?

In this case the question seems to me to lie between regarding the affection as a very mild and irregular form of lupus, or a very chronic and aberrant case of psoriasis. The want of proof of implication of the sebaceous glands and the probability from the absence of scars that the dermatitis did not go deeper than the papillary layer of the skin, appear to negative the former supposition. On the other hand, the early appearance of the affection, its chronic course with frequent exacerbations, the distribution of the eruption chiefly, though not at all exclusively, on the extremities and on the extensor surfaces, its dry and scaly form, its serpiginous progress and consequent gyrate pattern, all seem to point to a relationship with psoriasis. When to this we add that the disease appears in a brother and sister, and that my patient improved decidedly under full doses of arsenic, many other modes of treatment having produced no change, the evidence is certainly strengthened, but I do not pretend that it is conclusive.

I had drawings taken at the time, which I should be happy to show Dr. Fox, and a fuller account of both cases when under my care will appear in the forthcoming volume of the Guy's Hospital Reports.

I am, Sir, yours, &c.,

Harley-street, Dec. 3rd, 1880. P. H. PYE-SMITH.

NIGHT MEDICAL SERVICE IN NEW YORK.

BETWEEN the 5th of September, when the night medical service was put into operation in New York, and the 30th of the month, twenty-five visits were (says an American contemporary) made by fifteen physicians of the service, and of the patients visited, three paid fees. The majority of these were cases of sudden illness or emergencies occurring in the night-time among the poor, and there appears to have been no attempt on the part of anyone to take undue advantage of the charity.

T. Johnson.—We do not indicate particular physicians or surgeons.

Hygiene should write to the registrar of the university for a prospectus of the course of study.

Senex has not enclosed his card.

GLACIALINE.

To the Editor of THE LANCET.

SIR,—A food preservative termed "glacialine" has recently been introduced to public notice, and has already acquired a deservedly wide reputation. It possesses the remarkable property of preventing putrefaction and obviating fermentative change in liquid and solid foods. These qualities, together with its perfect harmlessness when taken into the stomach, or when topically applied to the skin or mucous membranes, induced us to think that in suitable cases it might be used as a medical agent. Having had occasion within the last few months to treat a large number of cases of diarrhœa, especially in children, and finding some of these cases very intractable, we determined to try the effect of glacialine, and the results have been highly satisfactory, and have far exceeded our expectations.

It has been demonstrated that sour milk irritates the whole alimentary canal; it will therefore be easily understood that such milk taken into the stomach of a delicate child will produce diarrhœa, and often cause death. Now, we argued, since glacialine prevents milk from turning sour, it will prevent diarrhœa. But we had two points definitely to solve. Firstly, whether glacialine possessed any physiological action on the system of children which would prove deleterious. Secondly, whether it would prevent or change the normal action of the gastric juice on the milk in a child's stomach. In order to settle these points we carefully watched its action in a large number of cases, and found that so far from being injurious in any way, the health of each child was considerably improved by the addition of glacialine to its food. And we have used considerably more of this substance than is necessary to keep the food sweet. With regard to the action of the gastric juice, we find it in no way interfered with. Our experience has been that although glacialine prevents the milk from decomposing when exposed to the air, the normal process of digestion in the stomach goes on as well with as without glacialine. We therefore believe an enormous amount of sickness and death among children would be prevented by simply using a small quantity of this perfectly harmless glacialine in their food.

Where diarrhœa actually exists, either from sour milk or unripe fruit, we recommend two to four grains of the glacialine powder with a little sugar of milk, three or four times daily, before food, or, with greater efficacy, dissolved in the child's milk in the proportion of three or four grains to the half pint. In this, as in other varieties of diarrhœa, it is unwise to attempt to check the discharge until all the materials in the stomach and bowels of an irritating character are got rid of. It is, therefore, a good practice to begin the treatment by giving a dose of olive or castor-oil.

An ointment made by thoroughly mixing a drachm of glacialine with an ounce of unguentum cetacei forms an excellent dressing for unhealthy sores. We have found it of the greatest benefit in indolent ulcers and slowly healing sores after burns. Under its influence the flabby granulations soon give way to those of a florid red colour so characteristic of the healthy healing process.

A lotion consisting of a saturated watery solution of glacialine, sweetened with a little glycerine, is useful as a gargle in aphthous conditions of the mouth, tongue, and throat. The lotion also allays the tingling, itching, and burning sensation so common in certain stages of eczema; and used as an injection it is advantageously employed in irritable conditions of the vulva and vagina, and in some cases checks the amount of secretion in leucorrhœa. This valuable substance is supplied retail by chemists, and wholesale by the Glasgow Antitropic Company in neat cylindrical tins, and in a dry place will keep any length of time. Trusting you will find room for this communication,

We remain, Sir, yours, &c.,

J. STUART, M.D.,
Dowlais, Dec. 17th, 1880. E. DAVIES, L.R.C.P. Edin.

H. J. F. should apply by letter to the College. He would require a knowledge of inorganic and organic chemistry, for which Roscoe's work might be recommended.

Mr. G. P. Field.—Soon.

Juvenal.—We are unable to answer the various questions. The course to take is to write to the secretaries of the several companies.

Rickets.—This point is discussed in an article in our present number.

R. W. will find some information on the subject in a letter published in our present issue.

A Victim has not stated what part of Australia, concerning the climate of which he desires information.

SMALL-POX.

To the Editor of THE LANCET.

SIR,—In reference to the recent small-pox returns I cannot think but that much might be done against small-pox by more stringent isolation and disinfection. May I call your attention to two recent cases in this parish?

H. W——, twenty-six years of age, died on Nov. 2nd, 1880, and was buried on Nov. 5th, after a week's illness from small-pox. The house is a four-roomed one; there are five adults in it and a boy of ten years. Some disinfecting fluid was sprinkled about the house, and sulphur was burnt in the room in which the woman died. This was the only disinfection to which the bedding was subjected, and the flock mattress was not unpicked. The disinfector said his ovens were out of order.

The boy was attacked on the 14th, and I urged isolation, but the parents provided themselves with a certificate from the medical man in charge of the case, stating that this was not a case of necessary removal. Our medical officer of health was powerless to act without a certificate from the medical man to the effect that the boy could be removed without danger. I obtained this certificate on the 16th, and on the next day the ambulance was sent, but the parents took their stand on the first certificate, and revoked the verbal permission for removal which I had obtained from them.

I visited the house on the 20th, and found the boy convalescent, and his mother pursuing her business of dressmaking. There had not been any second disinfection up to this time.

In another case a boy of two years was attacked. The grandmother went to the medical officer of health to get him removed, but he was unable to interfere, as Highgate refuses to admit a child under six years, so he referred her to the relieving officer. The relieving officer refused to remove the case because they were not paupers. After two days through the influence of a guardian, the case was removed by the parish There were six other children in the house in this case, one of thre. rooms.

I am, Sir, yours obediently,

JAMES MAHOMED,
Dec. 17th, 1880. Curate of St. Philip's, Stepney.

DRINKING TROUGHS.

DR. BREWER has been making everybody who possesses a horse in the metropolis uncomfortable by urging the very probable occasional spread of glanders through the medium of public drinking troughs. The Special Purposes and Sanitary Committee of the Metropolitan Board of Works has had this subject under consideration, and has submitted the following recommendation to the Board:—"That it be suggested to the Metropolitan Drinking Fountain and Cattle Trough Association, and other bodies and persons who provide public drinking troughs in the metropolis, that such drinking troughs should be so constructed and used as to have a constant flow of water passing through them and running off by means of a tumbling bay, direct to a gully; and that measures should be taken to ensure the troughs being thoroughly cleansed every morning." This recommendation has been adopted.

Mr. Wm. Hunter, M.B. and C.M.—Our correspondent is right. The qualifications he mentions do not legally carry the title of physician and surgeon, but surgeon and apothecary.

A Trained Nurse's letter is too long for insertion.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Brunton, London; Mr. Whipple; Dr. Taylor, Ulverstone; Mrs. Napton; Dr. De H. Hall, London; Dr. Hollis, Brighton; Mr. J. Cæsar, London; Dr. Amidon, New York; Dr. Lowins, London; Dr. Savage, Birmingham; Abow Ben Adham; Dr. Murphy, Sunderland; Captain Blount; Dr. Roedl, Frangensbad; Mr. Craigie, London; Dr. Herman, London; Surgeon-Major S. Smith; Mr. Mayer, New York; Dr. Finch, Salisbury; Dr. Ormsby, Leeds; Messrs. Richardson, Leicester; Dr. Rorke, Wigan; Dr. Jordan, Birmingham; Dr. Gerrish, Portland, U.S.A.; Dr. Day, Japore; Dr. Eastwood, Darlington; Dr. Finch, Salisbury; Mr. Learn; Dr. Smith, Dumbarton; Mr. Davey, Lincoln; Dr. Jones; Mr. Head, Plymouth; Mr. Grant, Kirk Micheal; Dr. Fenn, Richmond; Dr. Rasch, London; Dr. De Bartolomé, Sheffield; Professor Brown-Séquard, Paris; Mr. Hosking, Penzance; Mr. Wiseman; Mr. F. C. Hewett; Mr. G. W. Parker, Madagascar; Mr. Austin; Mr. Whittaker, Glasgow; Dr. G. Budd, Clifton; Mr. Sergeant, Bolton; Mr. Chestnut, Tralee; Mr. Boon, St. Kitts; Mr. Fuller, Winchester; Dr. Philipson, Newcastle-on-Tyne; Mr. H. C. Meyer, New York; Mrs. Naylor; Dr. Goodhart, London; Dr. Hawkes, St. Faiths; Dr. Sheen, Cardiff; Mr. Feldman, London; Mr. D. A. Flinn, Brownhills; Mr. W. Blyth, London; Dr. Gossett, Abingdon; Dr. G. Y. Hunter, Bombay; Dr. Davies, Marstey; Dr. Gill, Canterbury; Messrs. Oliver and Boyd, Edinburgh; A. C., Riscar; Alpha, Bedford; K. W. J.; Medicus, Halifax; M.D.; Læsus; Rickets; S. J.; A Young Practitioner; R.; R. W.; Hygiene; A Graduate of Medicine; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Fennell, Washington; Mr. Donaldson, Burt; Mr. Turner; W. Davison; Mr. Fitzgerald; Mr. Carter; S. Byers, Belfast; Mr. Allsop; Dr. Rudyard, Watford; Messrs. Strain, Belfast; Dr. Von Ruck, Norwalk, Ohio; Mr. Watkins, Worcester; Mr. Wilson, Eastbourne; Mr. Elliott, Reddish; Mr. Dickson, Brixton; Mr. Ryan, Gympie, Queensland; Professor Vanzetti, Padua; Mr. Finch, Colchester; Messrs. Fox & Co.; Dr. Squire, London; Messrs. Bragg and Son, Taunton; Permanens; F.R.S.; E. J. D., Hastings; Unqualified Assistant; H. C., Bangor; Medicus, Bradford; M. Y., Brighton; D. G. A.; Alpha, Reading; Fidies; R. B., Preston; Melancthon; R. G., Carmarthen; J. R. P., Leicester; M.A.; E. J.; Delta, Lydd; A. B., Manchester; Fides, J. P.; &c., &c.

Grantham Journal, Egyptian Gazette, Anti-Vivisectionist, Night and Day, Sanitary Engineer, Science, Detroit Lancet, Dental Jairus, The American, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Jan. 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Jan. 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On Atoms."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M.—Annual General Meeting. The following Specimens will be shown:—Rheumatism and Gout in the same subject; Diseased Kidneys from a Pig; On the Pathological Histology of Molluscum Contagiosum; Molluscum Contagiosum; Obstruction of Mesenteric Artery and Vein; Case of Strangulated Hernia; Recurrent Multiple Sarcoma; Enlargement of the Median Nerve (living specimen); Calcareous Aorta (card); Acute Inflammation of Muscle.—Annual Report of the Council. Election of Officers.

Wednesday, Jan. 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
EPIDEMIOLOGICAL SOCIETY.—7 P.M. Council Meeting. 8 P.M. Surgeon-Major Charles Oldham, "On the Nature and Origin of Climatic Fevers." Dr. J. Wm. Mackenna, "On the Cause and Origin of Fever."
OBSTETRICAL SOCIETY OF LONDON.—Meeting postponed from January 5th to January 12th.

Thursday, Jan. 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On Atoms."
HARVEIAN SOCIETY.—8½ P.M. Annual Meeting and President's Address.

Friday, Jan. 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Jan. 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On Atoms."

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